

THIRTY-SIXTH ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1903

MARINE

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OTTAWA

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1904

[No. 21—1904].







*To His Excellency the Right Honourable* SIR GILBERT JOHN ELLIOT, EARL OF MINTO,  
*Governor General of Canada.*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Sixth Annual Report of the Department of Marine and Fisheries, Marine Branch.

I have the honour to be,  
Your Excellency's most obedient servant,

JOSEPH RAYMOND F. PRÉFONTAINE,  
*Minister of Marine and Fisheries.*

DEPARTMENT OF MARINE AND FISHERIES,  
OTTAWA, December, 1903.







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REPORT  
OF THE  
DEPUTY MINISTER OF MARINE AND FISHERIES

To the Honourable

RAYMOND PRÉFONTAINE,

Minister of Marine and Fisheries.

SIR,—I have the honour to report on the transactions of the Marine branch of this department for the fiscal year ended June 30 last, and to give an account of the business up to date.

In this report will be found references to the reports of the Chief Engineer on construction and maintenance of lighthouses and other aids to navigation, in the different agencies of the department compiled from agents' reports, references to the reports of J. F. Fraser, relating to gas buoys and acetylene lighting, the chairman of the Board of Steamboat Inspection, chairman of the Board of Examiners of Masters and Mates, the inspectors of Live Stock Shipments, the director of the Meteorological and Magnetic Service, the inspectors of Signal Service, the reports on Life-boat Stations and Rewards for Humane Service; also references to the report of the Court of Investigation, into the causes of wrecks and casualties in the St. Lawrence river, and a special report made by myself of a trip to Prince Edward Island, in company with you, to examine the routes and harbours used in connection with the winter service of the steamers *Minto* and *Stanley*.

A short account of the work of the Dominion steamers is given, and the expenditure in connection therewith, the buoyage of the coast, harbours, and inland waters, the purchase of oil for the use of lighthouses, the marine hospitals in the Dominion, certificates to masters and mates, and wrecks and casualties.

The reports in full of officers of the department from which the summaries have been made, consist of the Chief Engineer's report, a report on gas buoys and acetylene lighting, a report from the Engineer in charge of Aids to Navigation statements of expenditure, revenue, sick mariners dues and wharfage and also reports pertaining to wrecks and casualties, steamboat inspection, life-boats, rewards for saving life and a list of lightkeepers. The most of these reports form appendices to this report.

The amount expended on the various branches of the public service comprised in the Marine branch of this department, during the fiscal year ended June 30 last, was \$1,587,052.24, the expenditure for the previous year was \$1,431,371.76, not including expenditure for civil government. The expenditure for civil government for the fiscal year ended June 30 last, was \$73,042.53 and for contingencies \$11,400. It will thus be seen that the expenditure for the various branches of the Marine branch and for



civil government was \$1,671,494.77. The Fisheries expenditure amounted to \$527,944.62, total \$2,199,439.39.

The amount voted by parliament for the different branches of the department of Marine and Fisheries, including Fisheries and the departmental salaries was \$2,256,466.72, it will thus be seen that the expenditure for the fiscal year was \$57,027.33 less than the amount voted by parliament.

The whole number of persons in the outside service of the Marine branch, including crews of fishery and marine steamers at the date of this report is 2027.

During the past fiscal year the expenditure for maintenance of lights and coast service, amounted to \$559,382.53, for construction, \$399,187.73, total for maintenance and construction, \$958,570.26, while for the previous year the expenditure for lighthouse and coast service, including construction, was \$696,088.02, showing an increase of expenditure for the year ending June 30 last, of \$262,782.24.

The appropriation for this service was \$988,370.00, the expenditure being \$29,499.74 less than the appropriation of parliament for the fiscal year.

### LIGHTHOUSE SERVICE.

The lighthouse service of the Dominion is divided as follows:—The Ontario division, embracing all lights from Montreal westward to the North-west Territories; the Quebec division, extending below Montreal and including the river and gulf of St. Lawrence and strait of Belle Isle; the Nova Scotia division, including St. Paul's Island, Cape Breton, Sable Island and Cape Race, Newfoundland; the New Brunswick division, the Prince Edward Island division and the British Columbia division, each including lights within the provincial boundaries.

The several districts, with the exception of the district above Montreal, are in charge of agents who receive instructions from the department, and report annually in addition to communicating with the department, in connection with all matters relating to their agencies.

The total number of light stations, lightships and fog-alarm stations in the Dominion on June 30, 1903, was 754 and lights shown 963, the number of steam whistles, fog-horns, bells and guns 94, the number of lightkeepers and engineers of fog-alarms with masters of lightships was 751.

The report of the chief engineer relating to lighthouse construction, repairs, hydrographic surveys, &c., contains detailed information. The principal repairs, changes and improvements at existing stations are referred to in his report, also, new aids to navigation. The work done at fog-alarm stations in connection with steam whistles, compressed air horns and explosives, is dealt with under the proper headings. Information is also given respecting the extent of repairs and some account of the repairs in detail under the head of the station.

### CORRESPONDENCE.

About 23,756 letters and telegrams were received in the department, during the fiscal year. The correspondence was carefully examined and replied to as far as neces-



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sary. About 14,755 letters were sent out during the same period. Forms, reports, circular letters, and notices inviting tenders, are not included in the number of letters addressed to this department or sent out.

These forms, &c., are numerous and require special attention as the matters to which they refer are important.

In the Records branch of the department, the letters received are carefully examined, entered in the record book, placed on file, and the copy of the reply attached, so that the letters and the answers can readily be seen, and any subject easily followed up.

## MERCHANT SHIPPING.

Reports relating to merchant shipping for the calendar year of 1903, have not been received from the registrars of shipping in various parts of the Dominion. The reports are made up to the end of the calendar year, as provided by the Canadian Shipping Act, and therefore, will not be received until some time after the month of January.

The statements showing the number of vessels in the registry books of the Dominion on December 31, 1903, will appear in Supplement No. 1 of this report. The number of new vessels built and registered will also be shown, and a comparative statement of the tonnage of new vessels built and registered, from 1874 to 1903, both inclusive.

Mr. W. L. Magee, chief clerk, attends to all matters in connection with merchant shipping.

## BUOYS AND BEACONS.

The extended coast line of Canada, numerous bays, inlets, rivers, lakes, harbours and other navigable waters require a large number of buoys. It has been found necessary to increase the number largely, during the past year. The increase in the number of buoys has caused a correspondingly larger expenditure, amounting during the last fiscal year, to a total expenditure of \$84,457.82. The cost of the service is materially increased in years when large contracts are made for steel, signal, gas and other coast buoys.

The department continues to find the use of steel buoys on the coast, more satisfactory than the large wooden can buoys formerly used. The districts now buoyed number about 340, and the buoys number about 3,600. A record of the names of the shoals, dangers, reefs and various points in channels, harbours, &c., where buoys are placed, is carefully maintained; this enables the department to immediately locate the buoys when any reference is made to them in the correspondence.

The contract system has been found to work most economically and efficiently; in the majority of instances the contracts are immediately under the supervision of departmental officers, whose duty it is to report to the department any neglect of work on the part of the contractors. There are now existing about 200 contracts, some of which will shortly expire, but new contracts will be entered into in the spring. These contracts are generally made for a period of three years. The contractors are paid semi-annually upon the certificate of the superintending officer. There are, however, some districts not under contract; the work is being attended to by the harbour masters. In these cases it has been found more advantageous to place the work immediately in the hands of these officers.



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A large number of whistling, bell and other iron buoys are maintained along the coast of the several provinces, by Dominion steamers, particularly on the Nova Scotia, New Brunswick and British Columbia coasts. These buoys are called coast buoys to distinguish them from harbour buoys. The cost of this maintenance by the steamers, is not charged directly to the buoy service, but is included in the cost of maintenance of the steamers, which frequently perform the double duty of attending to lighthouses and the coast buoy service, on the same trip.

The expenditure in connection with the buoy service for the year ended June 30, 1903, was as follows :—

For the province of Quebec, including the port of Montreal	\$29,122 91
Above Montreal, including Ontario.....	26,713 25
Nova Scotia.....	11,881 51
New Brunswick... ..	11,189 69
British Columbia.....	3,064 63
Prince Edward Island....	2,485 83
Total .....	\$84,457 82

In addition to the buoys for marking dangers, 68 gas buoys are maintained showing lights ; 19 in the Quebec agency, on the St. Lawrence river ; 14 between Montreal and Lake St. Peter ; 27 between Montreal and Kingston ; 1 in Pelee Passage ; 1 at the mouth of the Detroit river ; 3 in Parry Sound, and 3 in Halifax harbour.

The coast buoy service maintained by Dominion steamers on the coast of Nova Scotia, consists of 23 automatic whistling buoys, 3 gas buoys, 21 bell buoys and 145 steel can and conical buoys. In the New Brunswick agency, there are maintained in the same way, 18 signal buoys, 16 steel can and conical buoys and one bell boat. The signal coast buoys of Prince Edward Island, number 3 and the steel can and conical buoys 5.

In the province of Quebec, under the Quebec agency, one whistling buoy was established at Manicougan, and one bell buoy at Matane. There are sixty nine steel can and conical buoys maintained by the Dominion steamers in this agency. The complete list of these buoys forms part of the chief engineer's report.

The steamer *Shamrock*, is constantly employed in the buoy service on the St. Lawrence river between Montreal and Quebec, and the steamer *Scout* between Montreal and Kingston ; the latter steamer attends to the gas buoys above Montreal, on the St. Lawrence river. The new Dominion steamer *Druid*, performs the buoy service below Quebec, and attends to the gas buoys in the Quebec district.

The coast buoy service in British Columbia is performed by the Dominion steamer *Quadra*, and the list of buoys in the chief engineer's report shows the number of steel and other buoys. No whistling buoys have yet been established there. The service at the mouth of the Fraser river is performed by the Public Works steamer *Samson*, employed by this department.

Tenders were invited during the past year for the following steel buoys for the different agencies, viz. : 2 automatic whistling buoys, 2 Trinity bell buoys, 6 United States pattern bell buoys, 22 conical buoys and 12 can buoys for the Nova Scotia agency ; 2 automatic whistling, 3 Trinity bell buoys, 5 United States pattern bell buoys, 10 conical buoys, and 4 can buoys for the New Brunswick agency ; 2 conical buoys for the Prince Edward



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Island agency, and 3 swift current buoys for the St. Lawrence river. The average cost of each kind of buoy was as follows :—

Whistling . . . . .	\$815 00 each
Trinity pattern bell buoy . . . . .	950 00 “
United States pattern bell buoy . . . . .	571 00 “
Conical . . . . .	212 00 “
Can . . . . .	103 00 “

OIL FOR USE OF LIGHTHOUSES.

The contract for supplying lighthouse oil was carried out by the Imperial Oil Company of Montreal, for the season of 1903.

The specification upon which tenders were invited, required the oil to weigh at 62 Fahr., not less than 7·85, nor more than 8 lbs. per gallon, and to withstand a flash test of 115 Fahr.

The quantity of oil supplied lights above Montreal, during the season of 1903, was 21,908 gallons, imperial measure ; to the lights in the Quebec district, 28,947 gallons ; to the lights in the Nova Scotia district, 41,700 gallons ; to the New Brunswick district, 11,676 gallons, and to the Prince Edward Island district, 6,672 gallons.

In addition to this the department purchased from the Standard Oil Company, of New York, 9,000 gallons of American oil for the Nova Scotia district ; for the New Brunswick district, 5,000 gallons ; for the district above Montreal, 850 gallons, at 18¾ cents a gallon in New York. The freight was paid by the department. In addition to this, 5,810 gallons of oil was purchased for the British Columbia district, at 25 cents a gallon.

The list of prices according to contract is as follows :—

Delivered at	Per gall. in barrels.	Per gall. in case.
Sarnia . . . . .	16½	21¼
Port Dalhousie . . . . .	17¼	22
Kingston . . . . .	18	22½
Montreal . . . . .	18½	22¾
Quebec . . . . .	18¾	23½
St. John, N.B. . . . .	18¾	23½
Pictou, N.S. . . . .	19	23¾
Halifax, N.S. . . . .	18¾	23½
Charlottetown, P.E.I. . . . .	19½	24¼

SICK AND DISTRESSED MARINERS.

MARINE HOSPITALS.

Under the provisions of chapter 76, Revised Statutes, dues of two cents per ton register, is levied on every vessel arriving in any port in the provinces of Quebec, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia, the money thus collected forming the Sick Mariners' Fund. Vessels of the burden of 100 tons and



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less, pay the duty once in each calendar year, and vessels of more than 100 tons, three times in each year.

By an amendment of this Act passed at the session of parliament in 1887, 50-51 Victoria, chapter 40, it is provided that no vessel, not registered in Canada and which is employed exclusively in fishing or on a fishing voyage, shall be subject to the payment of this duty.

The receipts for the fiscal year ended June 30 last, amounted to \$64,851.55 being a decrease of \$1,002.28 as compared with the preceding year. The increase and decrease in receipts and for sick mariners' dues in the various provinces were as follows:—Nova Scotia, increase, \$1,805.80; New Brunswick, decrease, \$2,055.58; Quebec decrease, \$1,531.94; Prince Edward Island, decrease, \$4.80; British Columbia, increase, \$676.58.

The Sick Mariners Act does not apply to the province of Ontario, and consequently no dues are collected from vessels in that province, although a small expenditure is incurred on account of sick seamen. An appropriation is made by parliament to cover the expenditure at Kingston and St. Catharines, where general hospitals have been established and sick seamen were paid for at a per diem rate of 90 cents.

In the province of Quebec, the expenditure on account of sick seamen amounted to \$8,600.03, being \$672.41 more than the previous year. The total collections for the entire province amounted to \$18,231.98, being \$1,531.94 less than in the previous year.

At the port of Montreal, sick seamen are cared for at the General Hospital and at Notre Dame Hospital, under an arrangement made by the department, by which 90 cents per diem is paid for board and medical attendance of each seaman. The sick mariners' dues collected at the port of Montreal, during the fiscal year ended June 30 last, amounted to \$7,745.98.

At the port of Quebec, sick seamen are cared for at the Jeffery Hale and the Hotel Dieu hospitals, the sum of 90 cents per diem for each seaman is allowed for medical attendance and board. The sick mariners' dues collected at Quebec, amounted to \$7,773.58.

The expenditure on account of sick seamen in the province of New Brunswick for the fiscal year, amounted to \$6,619.14, being \$2,358.48 less than the preceding year, and the collection of dues to \$11,174.56, or \$2,055.58 less than the previous year. Marine hospitals have been maintained at Miramichi, Richibucto and Bathurst.

In the province of Nova Scotia, marine hospitals are maintained at the ports of Yarmouth, Pictou, Sydney, Lunenburg and Point Tupper. The total expenditure on account of sick seamen in the province of Nova Scotia for the fiscal year amounted to \$25,391.31, and the receipts to \$22,573.35.

At Halifax provision is made for the care of sick seamen at the Victoria General Hospital, under arrangements made with the managers by which the sum of 90 cents per diem is allowed for board and medical attendance.

In the province of Prince Edward Island, the sum expended on account of sick seamen, during the fiscal year, was \$1,279.91 and the receipts from sick mariners' dues \$450.04.



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Sick seamen are cared for at the Charlottetown and Prince Edward Island hospitals, under arrangements made with the managers of these institutions, at the same rate as is paid to the public hospitals in other parts of the Dominion.

In the province of British Columbia, the sum of \$6,159.58 was expended for sick and disabled seamen, while the receipts from the collection of sick mariners' dues amounted to \$12,575.22.

The marine hospital at Victoria has in attendance a medical superintendent with a salary of \$300 per annum, and a keeper whose salary is \$500 per annum. He is also allowed a rate of \$5.00 a week for board and attendance of each seaman. The keeper procures fuel, light, &c., at his own expense.

At the ports where no hospitals are established, in the provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, sick seamen are cared for under the chief officer of customs, when the vessel to which the seamen belong has paid the dues according to law. A circular to collectors of customs was issued February 7, 1891, permitting sick seamen to be attended at the port of arrival of a vessel, provided that the regular dues were previously paid at some port.

During the fiscal year the sum of \$598.67 was expended for shipwrecked and distressed seamen, under the provisions of the sick and distressed Mariners Act.

The total expenditure on account of sick and disabled seamen and marine hospitals amounted to \$48,151.48 and the appropriation of parliament for this service was \$50,000.00. The dues collected amounted to \$64,851.55.

The receipts and expenditure in connection with sick and distressed seamen from the year 1869 were as follows:—

—	Receipts.	Expenditure.	—	Receipts.	Expenditure.
	\$ cts.	\$ cts.		\$ cts.	\$ cts.
For the fiscal year ended			For the fiscal year ended		
June 30, 1869	31,353 78	26,987 64	June 30, 1888	41,669 64	36,447 85
" 1870	31,410 46	27,029 34	" 1889	39,306 29	41,320 59
" 1871	29,683 41	28,971 22	" 1890	47,881 75	41,729 11
" 1872	34,911 64	34,947 60	" 1891	43,829 68	35,155 12
" 1873	37,136 10	41,016 43	" 1892	45,381 92	33,498 83
" 1874	41,500 16	59,778 90	" 1893	46,190 69	35,052 37
" 1875	37,801 46	50,684 76	" 1894	49,105 40	38,403 94
" 1876	41,287 66	48,828 49	" 1895	42,815 74	38,332 55
" 1877	43,739 21	51,647 94	" 1896	45,751 61	36,683 36
" 1878	44,665 07	43,780 90	" 1897	54,358 10	35,931 19
" 1879	37,779 57	42,729 36	" 1898	54,552 31	34,526 83
" 1880	42,523 20	42,160 91	" 1899	57,365 79	37,353 29
" 1881	49,779 72	40,667 52	" 1900	59,971 84	32,743 30
" 1882	45,951 47	39,359 11	" 1901	59,783 34	34,944 93
" 1883	45,573 42	36,249 65	" 1902	65,853 83	51,827 12
" 1884	48,667 07	39,553 58	" 1903	64,851 55	48,151 48
" 1885	39,068 39	44,501 57			
" 1886	40,848 05	50,377 62			
" 1887	42,334 92	37,447 35	Total.....	1,584,684 74	1,406,827 55



STEAMBOAT INSPECTION.

The total number of steamboats reported in the several districts in the Dominion is 1,633, of this number 120 were added to the Dominion during the year, the gross tonnage being 283,326.51. Fees were collected for inspection amounting to \$27,813.09, the fees from engineers for certificates amounted to \$935.00 and fees for inspection of tow barges to \$140.00, making the total receipts from steamboat inspection and engineers' certificates \$28,888.09. The net receipts to the credit of the fund for the previous year amounted to \$38,458.92.

The total expenditure in connection with inspection was \$30,172.09. Increase of expenditure for the last fiscal year of \$2,678.29.

The consolidated laws relating to steamboat inspection came into force on the 1st day of January, 1899.

The report of the chairman of the Board of Steamboat Inspection forms Appendix No. 12.

The following is a comparative statement of the receipts and expenditure in connection with steamboat inspection :—

—	Receipts.	Expenditure.	—	Receipts.	Expenditure.
	\$ cts.	\$ cts.		\$ cts.	\$ cts.
For the fiscal year ended			For the fiscal year ended		
June 30, 1870	12,521 29	7,379 18	June 30, 1891	21,644 72	22,183 76
" 1871	10,369 96	8,321 00	" 1892	20,994 84	22,736 59
" 1872	11,710 43	8,500 00	" 1893	25,295 35	24,386 95
" 1873	15,412 75	11,205 54	" 1894	24,835 47	25,961 36
" 1874	15,603 19	10,291 58	" 1895	24,630 56	26,385 88
" 1875	15,011 90	12,199 81	" 1896	24,002 32	26,321 27
" 1876	13,811 24	13,081 86	" 1897	25,094 95	26,837 83
" 1877	15,858 42	12,073 01	" 1898	31,525 40	26,342 29
" 1878	12,431 25	13,228 28	" 1899	33,854 45	28,035 49
" 1879	12,331 16	13,076 46	" 1900	36,474 83	27,965 92
" 1880	15,424 02	11,854 34	" 1901	34,967 37	29,247 59
" 1881	16,905 49	12,211 65	" 1902	38,458 92	27,493 80
" 1882	15,277 78	14,835 97	" 1903	28,888 09	30,172 09
" 1883	12,577 36	16,209 02			
" 1884	15,371 79	21,893 28	Deduct expenditure	666,243 37	664,033 21
" 1885	13,343 66	23,235 04	from receipts.	664,033 21	
" 1886	14,087 76	21,775 57			
" 1887	12,701 20	22,837 80	Balance to credit of fund	2,210 16	
" 1888	12,550 14	21,430 45			
" 1889	12,576 18	22,313 03			
" 1890	19,859 18	20,989 52			

The Steamboat Inspection Act of 1898 was amended and fees for the inspection of Dominion steamers will not now be collected. The Governor General in Council, however, may re-impose the steamboat inspection fees when it is considered necessary to do so.

The Act as amended does not exempt foreign steamboats from the charge of inspection fees when inspected in Canada, unless the said foreign steamer belongs to a country which has reciprocal arrangements in steamboat inspection with Canada. The Governor General in Council may direct that no steamboat inspection fee or tax be levied on



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steam vessels of such country, going to and from Canada. It is further provided that any country outside of Canada having steamboat inspection laws approximating the steamboat inspection law of Canada, and the steamboats of such country have unexpired certificates of inspection issued by the proper authorities of such country, the Governor General in Council may direct that they shall be subject to no other inspection than may be necessary to satisfy the Canadian inspectors that the condition of the steamboat, her boilers, machinery and life-saving equipment, are as stated in the current certificate of inspection; but no such certificate of inspection shall be accepted as valid in Canada, except when held by steamboats of a country which has by its laws accorded to the steamboats of Canada the same privilege.

The Act as amended is entitled 'An Act to amend the Steamboat Inspection Act, 1898.' Assented to August 13, 1903.

An Act further to amend the Steamboat Inspection Act of 1898 was passed and assented to October 24, 1903; the following is a copy:—

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. Subsection 1 of section 27 of *The Steamboat Inspection Act*, 1898, is hereby amended by adding, at the end thereof, the following words:—

'Provided, however, that in any case where oil is used as fuel for the production of motive power on steamboats, oil which will bear a test of two hundred degrees Fahrenheit without taking fire may be accepted if properly stored with safe and suitable provisions as to safety, and to guard against fire and explosion from such oil to the satisfaction of the steamboat inspector.'

The following lists contain the names of the inspectors of boilers and machinery, and hulls and equipments of steamboats, viz. :—

Name.	Position.	Address.
Edward Adams.....	Chairman of Board of Steamboat Inspection.....	Ottawa.
M. P. McElhinney....	Inspector of Hulls and Equipment.....	"
I. J. Olive.....	"	St. John, N.B.
S. R. Hill.....	"	Halifax, N.S.
William Evans.....	"	Toronto, Ont.
M. R. Davis.....	"	Kingston.
Philippe Duclos.....	"	Sorel.
R. Collister.....	"	Victoria, B.C.
John Dodds.....	Inspectors of Boilers and Machinery....	Toronto, Ont.
E. W. McKean.....	"	"
T. P. Thompson.....	"	Kingston, Ont.
Wm. Laurie.....	"	Montreal, P.Q.
L. Arpin.....	"	"
J. Samson.....	"	Quebec, P.Q.
J. P. Esdaile.....	"	Halifax, N.S.
J. A. Thomson.....	"	Victoria, B.C.
G. P. Phillips.....	"	Rat Portage, Ont.
Frank M. Richardson...	"	Vancouver.
Douglas Stevens.....	Inspector of Dominion Steamers.....	Halifax.



## OUTSIDE SERVICE, MARINE BRANCH.

The number of persons employed in the Outside Service on June 30, 1903, was as follows :—

Superintendent of lights and light-keepers, &c., in Ontario and above Montreal . . . . .	194
Officers of agency in the city of Quebec and light-keepers, fog-whistle-keepers, crews of light-ships, &c., at or below Montreal, in the province of Quebec . . . . .	174
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, attendants at humane establishments, &c., in Nova Scotia . . . . .	246
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, &c., in New Brunswick . . . . .	108
Agent, foreman of works, messenger and light-keepers, in Prince Edward Island . . . . .	50
Agent and light-keepers in British Columbia . . . . .	37
Officers and crews of Dominion steamers and vessels, including Fisheries Protection Service . . . . .	459
Coxwains of life-boats . . . . .	26
Inspectors of steamboats . . . . .	19
“ “ shipments of live stock . . . . .	3
Examiners of masters and mates . . . . .	15
Officers and servants in marine hospitals . . . . .	20
Shipping masters . . . . .	35
Harbour masters . . . . .	225
Officers of observatories, meteorological observers, &c., receiving pay . . . . .	170
Hydrographers and engineers at Ottawa . . . . .	10
Receivers of wrecks . . . . .	45
Wharfingers . . . . .	190
<hr/>	
Making a total of . . . . .	2,027

For the previous year the number was 1,916. In addition to the 2,027 mentioned above, there are 76 registrars of shipping who act under the direction and control of this department, but are, at the same time, collectors of customs at various ports of registration, and receive no salary or fee in their capacity as registrars. There are 95 measurers or surveyors of shipping throughout the Dominion who act as officers of this department, and are remunerated from their fees of office, although in addition to such office, many of them hold positions in the customs service. Also, in addition to the above, by Orders of Council of April 21, and December 2, 1874, the chief officer of customs at each port in the provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, where no separate shipping office has been established, is to be held and deemed a shipping master, is to receive the fees, make the yearly returns to the department, and act in that capacity under its directions.



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## CERTIFICATES TO MASTERS AND MATES.

The report of Lieutenant Reginald Salmon, chairman of the board of examiners of masters and mates, forms appendix No. 7 of this report.

During the year ended June 30, 1903, 299 candidates for masters' certificates inland and coasting, and 133 candidates for mates' certificates inland and coasting, were examined; 30 applicants for masters and 9 for mates failed, 13 applicants for masters' certificates foreign sea-going, 18 for mates and 23 for second mates were examined; 4 applicants for masters, 5 for mates and 2 for second mates failed.

The total amount collected in fees from applicants for certificates, during the fiscal year ended June 30, 1903, was \$5,790.50 and the amount expended on account of the service was \$4,968.36 leaving a balance to the credit of the service of \$822.14.

The vote for this service was \$5,000, leaving an unexpended balance of \$31.64.

The following statement shows the total receipts and expenditure on account of masters and mates since 1871 :—

			Expendi- ture.	Receipts.	
					Expendi- ture.
					Receipts.
			\$	cts.	\$
					cts.
For the fiscal year ended June					
30, 1871.	1,410	45			
" " 1872.	4,312	07	1,344	00	
" " 1873.	6,466	18	4,963	00	
" " 1874.	4,520	19	2,995	00	
" " 1875.	5,696	62	2,715	00	
" " 1876.	4,672	08	2,021	87	
" " 1877.	4,050	00	1,740	50	
" " 1878.	4,249	76	1,296	50	
" " 1879.	4,250	12	1,334	50	
" " 1880.	4,253	43	1,547	00	
" " 1881.	3,888	41	1,333	50	
" " 1882.	3,965	19	1,152	50	
" " 1883.	4,021	20	1,314	00	
" " 1884.	3,909	59	9,437	50	
" " 1885.	4,324	15	2,897	00	
" " 1886.	5,245	28	2,152	00	
" " 1887.	4,855	98	2,172	00	
" " 1888.	5,060	96	3,220	80	
" " 1889.	4,381	04	2,202	00	
" " 1890.	4,117	83	2,186	00	
			For the fiscal year ended June		
			30, 1891.		
					4,255 24
			" " 1892.		4,363 88
			" " 1893.		4,116 99
			" " 1894.		3,721 33
			" " 1895.		3,758 29
			" " 1896.		4,062 82
			" " 1897.		3,536 29
			" " 1898.		3,335 40
			" " 1899.		3,568 26
			" " 1900.		3,750 69
			" " 1901.		3,720 25
			" " 1902.		3,805 59
			" " 1903.		4,968 36
			Expenditure. ....	138,123	92
			Receipts .....	97,626	97
			Excess of expenditure over receipts.....	40,496	95

## DOMINION STEAMERS.

## ' MINTO.'

The *Minto* is an iron steamer 225 feet long, 32.6 feet in breadth, 20.6 feet in depth, gross tonnage 1,089, net tonnage 371; indicated horse power 2,900, and nominal horse power 21. The steamer is commanded by Captain Andrew Finlayson, and has a crew of 39 in all. On July 1, 1902, the *Minto* was laying at the wharf in Charlottetown undergoing the usual cleaning and overhauling of the machinery. The steamer remained in Charlottetown preparing for the winter service until December 11, when she took up the service between Charlottetown and Pictou, and continued to



make tri-weekly trips until December 22. Hillsboro bay becoming full of ice and lolly, the captain deemed it unsafe to continue running to Charlottetown and placed the steamer upon the Georgetown-Pictou route.

On December 27, the steamer was ordered to the relief of the schooner *Evolution*, adrift in Hillsboro bay, and the crew said to be in danger of perishing. The schooner was found under sail in fairly open water just outside the port of Charlottetown, and was towed in to the wharf on December 28. The *Minto* then returned to the Georgetown-Pictou route and remained on it until January 14. On that date she left Georgetown to go to Amet island, where a flag of distress was flying from the lighthouse. Information was procured by sending a boat to the light station. It was found that medical assistance was required for the light-keeper's wife and two children, who were very sick. The *Minto* then resumed her trips and continued on the route until February 13, when the steamer was sent to the assistance of the *Stanley*, at that time ice bound.

The *Minto* had great difficulty in reaching the ice pan in which the *Stanley* was fast, and was engaged in the effort from February 13 to 25. The *Minto* was unable to reach the *Stanley* but left on the ice a quantity of coal, some provisions and a horse and sleigh, to convey the articles to the *Stanley*. On February 26, the steamer arrived at Georgetown and on the 28th left again to go to the assistance of the *Stanley*, but on March 2, the *Minto* in attempting to break into the ice pan in which the *Stanley* was fast, broke her propeller blades and became helpless. The weather moderated and the crews of both steamers were set at work to cut the *Stanley* out and succeeded in doing so on March 17.

The *Minto* was taken in tow by the *Stanley* to Pictou reaching that port on the 18th March. A contract was immediately entered into with a Halifax firm to replace the broken propeller blades, and this was successfully finished by divers on the 27th March.

The steamer then resumed her trips on the route between Pictou and Georgetown. She was placed upon the Charlottetown-Pictou route on the 31st of March and continued on it until the 11th of April.

The *Minto* was then laid up for several days and on the 27th of April she was placed upon the marine slip at Pictou, to examine and paint the bottom. When this was done the steamer returned to Charlottetown on the 21st of May, where she remained until the 12th of June. She then replaced one of the steamers of the Steam Navigation Co., while that vessel was on the marine slip at Pictou. The *Minto* continued in the mail and passenger service until the 20th of June.

During the winter of 1902 and 1903, the *Minto* made 44 round trips and her earnings were \$11,249.53.

#### 'STANLEY.'

The *Stanley* is an iron steamer commanded by Captain Angus Brown, and has a crew of 36 in all. Her dimensions are: length 207 feet, breadth 32 feet, and depth of hold 19 feet, tonnage 914 gross, and 395 registered.

On the 1st of July, 1902, this steamer was working in the lighthouse and buoy service, in the Nova Scotia agency. On the 18th October the *Stanley* returned to Charlottetown from Halifax and was inspected by the inspector of Dominion steamers. The annual



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overhaul of the machinery and hull was then begun. The work was begun on the 24th October and completed on the 11th December, on which date the steamer left for Pictou to coal and took on board 150 tons of coal, but owing to a strike in the mines she was unable to get her full quantity and was consequently delayed several days. The vessel arrived at Summerside on the 18th December and was immediately placed on the route between Summerside and Cape Tormentine, without loss of time.

From the 18th December to the 10th January, 1903, regular trips were made between Summerside and Cape Tormentine. On Monday morning of the 12th of January, the *Stanley* left Summerside at 7 a.m. but was caught in the ice off Sea Cow. The captain's daily report of the state of the weather and ice is as follows:— 'First part of this day heavy gale with snow. Wind S.E. At 3 a.m. commenced raining, at 7 a.m. ceased, strong gale and overcast. Found the ice in Summerside harbour and bay very heavy and much rafted. With difficulty the ship worked through it. At noon the ship stuck fast in heavy rafted ice. At 2.25 p.m. the ship cut loose. At 3 p.m. ice commenced running and rafting badly against ship's sides and closing the track behind.'

The 13th. 'Steamed one mile. At 6 p.m. stuck fast in heavy rafted ice and running and piling up heavy against ship's sides. At 3.50 p.m. got out of the jam; at 4.10 p.m. a heavy body of ice rushed in through the board ice taking the ship with it and piling up all around the ship in large quantities.'

On the 14th, 'Teams came out and took mails and passengers ashore.' On the 16th, 'Steamer still fast in the ice, people employed cutting the ice, finding it to be rafted to the depth of 14 feet in some places. The 17th, 'crew employed cutting and moving ice. Port side of steamer badly dinged by the crushing ice on the 13th.' On the 20th, 'Steamer still fast in the ice, crew employed cutting ice.' On the 23rd, men and horses from Summerside went to the relief of the *Stanley*. The 24th, 'During a gale and snow squalls the packed ice broke away from the board ice with the ship fast in it and commenced drifting down the Straits.'

The steamer was held in the ice drifting backwards and forwards in the Strait of Northumberland, going as far east as Merigomish at one time. On the 30th of January an officer of the department was sent off from shore with a crew and with dynamite to blast the ice. The dynamite had no further effect than merely making small holes. The sheet of ice in which the steamer was caught was about two miles long by one mile wide, and packed all around the ship and underneath her so tightly that she could not work her engines nor propeller. Attempts were made on several occasions, to break up the ice by explosives sent out by the agent of the department from shore.

The *Minto* went to the relief of the *Stanley* on the 19th February and put 45 tons of coal on the ice, which was carried by the men to the *Stanley*, she also left some provisions. The *Minto* was unable to reach the *Stanley* and went to Georgetown. Another attempt was made by the *Minto* to reach the *Stanley* but she broke her propeller blades in the heavy ice and became helpless. The whaling steamer *Newfoundland* was engaged to go to the relief of both steamers and left Port Hawkesbury, got around the Island of Cape Breton but was compelled to abandon the attempt to reach the steamers.

The Charlottetown Board of Trade and the local government, sent men to assist in cutting out the *Stanley*, but they rendered very little assistance. The *Stanley* was not very far from the edge of the ice in which she was caught when the men sent by the Board of Trade arrived. The dynamite taken by the men to blast out the *Stanley*



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was of very little help. The mild weather and the efforts of the united crews of the steamers *Minto* and *Stanley* enabled the steamer with her own power to get clear of the packed ice.

The *Stanley* got clear of the ice on the 17th of March and began towing the *Minto* to Pictou.

In order that the provisions on board should be sufficient, a portion of the crew was sent ashore in January. The captain and officers and the remaining portion of the crew, were much exhausted when the *Stanley* was finally released.

On the 18th March the *Stanley* reached Georgetown and immediately took up the winter communication between that port and Pictou, continuing on the route until the 7th of April. The steamer was then ordered to Summerside to break up the ice in the bay and arrived on the 9th of April at Summerside after performing the work which she was sent to do. The vessel then proceeded to Charlottetown and was laid up for overhaul of the machinery and boilers.

The *Stanley* made 17 return trips between Summerside and Tormentine and her earnings were \$1,304.96. This steamer made 12 round trips on the Pictou-Georgetown route and her earnings were \$2,865.76. Total earnings \$4,170.72.

Captain Brown was requested to report upon the feasibility of the Summerside and Cape Tormentine route. He stated that he had an exceptional opportunity of judging of the practicability of the route, during the time the *Stanley* was drifting backwards and forwards in the ice pack, and he is of the opinion that it would have been impossible to keep up the service on that route after the 13th of January of the year 1903 even if the steamer had not been forced into the heavy body of ice which packed around her.

Tenders were invited for repairs to the hull of the *Stanley*. From long service the plates above the water line had become indented. The contract required the removal of the indentions and the placing of intermediate frames and the re-inforcing of the plates between the frames.

On the port side, 14 angle bars were fitted and 4 angle bars were placed in the engine store room, 13 angle bars were placed in the side bunker pocket in the way of boilers, and other stiffening angles were properly fitted to the plating and securely riveted.

On the starboard side 14 angle bars were placed in after cabin and in the engine room, 5 angle bars. In the after bunker the angles and stiffeners were removed and replaced. The plates were faired and the bent frames were also faired and brought back to the plating.

The old funnel was removed and a new one placed in position.

The machinery was also overhauled and properly fitted up.

The contract price for the work on the hull and new funnel was \$3,975. The overhauling of the machinery was done by days work, and the engineers of the steamer were employed as well as machinists. The cost for machinist and machine work independently of the work done by the engineers, was \$2,433.42, making a total of \$6,408.42 for repairing the machinery and hull.



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## 'LADY LAURIER.'

The *Lady Laurier* is a twin screw steel steamer, commanded by Captain P. C. Johnson and has a crew of 46 in all. Her dimensions are ; 214.9 feet, breadth 34.2 feet, and depth 17.2 feet, tonnage 1,051.04 gross and 413.20 registered.

The report of 1902 contains a short report relating to the construction of the steamer *Lady Laurier*, which was built to take the place of the steamer *Newfield*, wrecked in the Nova Scotia agency. The tender price of the steamer was \$184,983 but some changes, alterations and improvements were made which increased the first cost of the steamer to the sum of \$192,465.91 including the furnishings.

A crew was selected and sent from Halifax to Glasgow to bring the steamer to Halifax. She left Greenock on the 23rd December, 1902, with fair prospects of getting clear of the Irish coast. The weather became very boisterous but the steamer continued on her way until the wind was so violent and the seas so heavy, that she was threatened with damage. The captain deemed it wise to put back for shelter and returned to Greenock on the 29th December, having been out six days.

Some damage was done to the steamer and on examination, it was found necessary to make repairs. While the repairs were being made it was determined to make some still further improvements in connection with the steamer, suggested by the chief engineer. In consequence of the alterations the steamer was detained and the cost materially increased.

When the alterations were completed the steamer sailed for Halifax and arrived on the 22nd February, in Halifax harbour.

On the 24th February, the steamer took in stores and some painting and cleaning was done, rendered necessary by the trip across the Atlantic. On the 6th March the *Lady Laurier* was sent to Sable island with supplies and on her return trip she supplied some of the stations with coal. The steamer was then moored at the wharf at Halifax and the cable gear which had been brought out from Scotland, was taken from on board and stored. On the 17th of March, the steamer entered upon the service of lifting and placing large automatic buoys and continued in that service until she was again sent to Sable island, on the 8th of May. The weather was extremely rough when the steamer arrived at Sable island and she was compelled to lay off the island until the 16th of May, when the supplies were landed.

The steamer was engaged in the lighthouse and buoy service until May 23, when she entered upon fisheries protection service, and was employed in that service until May 27, when she resumed the lighthouse service. The steamer made another trip to Sable island taking two horses which had been imported from Belgium, and landed them on the island on June 13. She continued in the lighthouse and buoy service until June 27, when she moored at the wharf at Halifax for the purpose of inspecting the engines and boilers. When this work was completed, the *Lady Laurier* again took up the lighthouse and buoy service to the westward.

This new steamer is considered a very powerful and staunch boat, but unfortunately has met with accidents which have caused considerable damage to the hull and machinery. In the first case this was due to the very severe weather met on the Atlantic ocean, and in the next case to an accident off Lockport, said to be due to a buoy being out of place.



## ' ABERDEEN '.

The *Aberdeen* is an iron screw steamer 180 feet long, 31 feet broad and 16 feet deep ; her tonnage is 674 gross, and 266 net. Her captain is Sigismond Bélanger, and her crew consists of 36 all told.

On July 1, 1902, the *Aberdeen* was engaged in delivering supplies to the lighthouses in the St. Lawrence river and gulf. On the 23rd she went to Pictou to coal for her return trip to Quebec and arrived at Quebec on July 31. The boilers were cleaned and lighthouse supplies were again taken on board. The steamer left Quebec on August 15, with supplies for the lighthouses in the river St. Lawrence and straits of Belle Isle. When the work of delivering these supplies was completed, the *Aberdeen* proceeded to Pictou and was placed upon the slip for the purpose of painting and scraping the bottom of the vessel. This work was completed and the vessel coaled on September 23.

The *Aberdeen* arrived at Quebec on September 28 and the boilers were again cleaned and repaired. Lighthouse supplies were then taken on board and the vessel started on another trip for the delivery of lighthouse supplies, in the St. Lawrence river and gulf and Anticosti Island. The work of delivering supplies in the straits of Belle Isle and on the coast of Newfoundland, was completed on November 3 and the *Aberdeen* then proceeded to Sydney for coal. The Magdalen Islands were visited and supplies delivered; after which the steamer returned to the St. Lawrence river, on her way taking up the Manicougan automatic buoy. She arrived at Quebec on November 17, and on the 25th proceeded to supply some lights in the St. Lawrence river on her way to Prince Edward Island and Nova Scotia.

The bell buoy and other buoys at Cape Tormentine, N.B., were taken to Charlottetown, where the steamer arrived on December 1. The three automatic buoys on the coast of Prince Edward Island were taken up by this steamer and landed on the wharf at Charlottetown. The vessel then proceeded to Pictou to coal and enter upon the work of the Nova Scotia agency. This work consisted of taking up and replacing the coast automatic buoys and delivering supplies to the lighthouses in the Nova Scotia agency. The steamer was engaged in that agency during the winter in the usual work of lifting, painting and replacing buoys and delivering supplies to the lighthouses and fog-alarm stations. The *Aberdeen* also delivered supplies to Sable Island.

The steamer left the Nova Scotia agency on April 26, and proceeded to Charlottetown doing some buoy work on her way, and returned to the Quebec district on the 30th April.

Repairs were then made to the steamer, of various kinds. Supplies were taken on board for the lighthouses in the Quebec district and the *Aberdeen* left Quebec on the 8th of June. She was engaged in the lighthouse service of this agency until the 1st of July.

## ' LANSDOWNE.'

The *Lansdowne* is a wooden steamer, commanded by Captain George W. J. Bissett, and has a crew of 34 men in all. Her dimensions are 188 feet in length, 32 feet in breadth, and 15 feet in depth ; gross tonnage 680, and registered tonnage 463.

The steamer *Lansdowne* was engaged in the lighthouse and buoy service of the New Brunswick district, from July 1 up to the 26th of that month, when she took up the



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work of the Nova Scotia agency. The vessel was engaged in the regular lighthouse and buoy service of this agency until September 19, on which date she returned to St. John. The lighthouse and buoy service of the New Brunswick agency was again taken up and the ship was engaged in this service until January 17, on which date the vessel was put out of commission and the crew paid off.

While the *Lansdowne* was out of commission she was placed on Hilyards Blocks, and butts in bottom caulked and bottom painted with copper paint. The deck was also painted, and the ship was painted inside and out.

The steamer was put in commission on May 1, and from that date up to the end of the fiscal year, she was engaged in the lighthouse and buoy service of the New Brunswick agency.

Tenders were invited for new main boilers, a donkey boiler and water tanks for this steamer. The contract was awarded to Messrs. James Fleming, who are to complete the work of making and placing the boilers and tanks in the steamer, for the sum of \$10,955.

## ‘BRANT.’

The *Brant* is a wooden steamer 100 feet long over all, 19 feet in breadth, and 8 feet deep. Her tonnage is 141 gross and 57 net. She is commanded by Captain D. Mackinnon, and has a crew of 12 all told.

The steamer *Brant* was engaged in the lighthouse service of the Prince Edward Island agency from the beginning of the fiscal year up to August 14, on which date she was hauled out on the marine slip at Pictou and a new shoe was placed on her keel, the old shoe having been destroyed by worms. When this work was completed the steamer returned to Charlottetown and entered the fisheries protection service on August 19, in which service she was engaged until the 27th of that month.

The *Brant* was then engaged in the lighthouse service and the fisheries protection up to October 29, and from that date she was employed in the lighthouse and buoy service until she was laid up.

The steamer was put in winter quarters on December 10, and the crew were paid off. While the steamer was out of commission the machinery and gear were overhauled by the engineers. A whale back cover was placed over the forward end of the *Brant* to keep the water from flooding her decks when going head-on in a seaway.

On May 15, the steamer left Charlottetown for Pictou to coal and to tow the Biological Station from Canso to Pictou. The vessel then took up the lighthouse and buoy service and was engaged in it until June 4, on which date the steamer was sent to Pictou, to have a new wooden rudder post put on and other small repairs made.

When this work was completed the steamer towed the Biological Station to Malpeque, and on the return trip called at Cascumpec, to place the conical buoy to mark the best water over the bar. The steamer then returned to Charlottetown and the crew was employed in cleaning and painting the ship until the end of the fiscal year.

## ‘DRUID.’

As reported in the annual report of last year, the *Druid* was built by Messrs. Fleming and Ferguson, of Paisley, Scotland. The tender of the builders was \$110,960,



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but a change in the position of the boilers from three abreast to two abreast and one ahead, was deemed necessary for the better arrangement of space. The total cost of the steamer was, \$113,274.30. The *Druid* is a twin-screw steamer and her dimensions are as follows, viz:—length, 160 ft., breadth, 30.1., depth in hold from tonnage deck to ceiling amidships, 12.5 ft. Depth from top of deck amidships to bottom of keel, 13.38 ft. Length of engine-room, 50.8 ft. The gross tonnage is 503.26 and the registered tonnage, 148.55. Engines, triple expansion, two sets, diameter of cylinders 13 ins., 21 ins., and 34 ins., length of stroke 34 ins., steam working pressure 180 lbs. The *Druid* has a crew of 29 men all told.

The steamer was built to take the place of the old *Druid*, which was condemned. She has been employed in the Quebec agency, principally in connection with buoy service, placing and taking up automatic, gas and other buoys. She began her work on the 7th of August, 1902. The steamer delivered supplies to some of the lighthouses and was also engaged in carrying workmen and material for repairs to the Upper Traverse permanent pier. The *Druid* completed her work for the season of 1902 on the 5th of December and was put in winter quarters on the 6th. She resumed her work on the 20th of April, 1903, and was engaged in placing buoys and conveying material to lighthouses during the spring. The *Druid* was also employed in carrying material and gear to the Upper Traverse pier. The vessel continued in this work until the 1st of July.

This steamer is a very fine vessel of her kind, and has been found very suitable for the work in which she is engaged. Some slight changes were made in the vessel during the season of 1903.

‘BAYFIELD.’

This steamer was formerly called the *Lord Stanley*, and was purchased in the fall of 1901 from Mr. George T. Davie, of Lévis, P.Q., for \$50,000.00. Her length is 140 feet, main breadth to outside of planking 24.1, depth of hold from tonnage deck to ceiling at midships, 11.35, gross tonnage 276.31, registered tonnage 85.58. This steamer was built in Scotland and is a twin-screw with triple compound direct acting vertical engines with inverted cylinders, diameters 12 $\frac{3}{4}$ , 20 and 33, length of stroke 24 inches, horse power 160.

The steamer was purchased for the hydrographic survey in Lake Superior. The old *Bayfield* was not of sufficient size and was otherwise unsuitable for survey work in Lake Superior. The *Lord Stanley* was taken from Quebec to Toronto and on her way was found to be a very powerful steamer, having had to contend with ice in the St. Lawrence river and Soulanges canal.

While leaving the dock at Toronto the steamer met with a serious accident, carrying away her rudder and doing considerable damage to her stern. The repairs cost \$3,200, for which a tender had been invited.

In the early part of 1902 the steamer was chartered to the Public Works Department, and was in the employ of that department during the season of navigation.

Alterations for the hydrographic survey work were necessary, and they were made in the government shipyard at Sorel, at a cost of \$15,950.77; this includes the installation of an electric light plant and the fitting up of cabins, mess room and materials for rigging.

The *Bayfield* is a most suitable boat for the work in which she is employed and is a staunch, strong and good steamer.



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It was deemed advisable to change the name of the *Lord Stanley* to *Bayfield*, in order to retain the name in connection with the hydrographic survey steamer, and also because one of the winter service boats running between Prince Edward Island and the mainland, is named *Stanley*.

The *Bayfield* was fitted out at Montreal and left on May 26, for Lake Superior. The survey was begun about the middle of June, on the north shore, from Pigeon river eastward, including Thunder bay, and the islands off it. A traverse of this shore and the islands as far east as Thunder cape was completed and about half the area sounded. The steamer completed her work for the season and was taken to Owen Sound, in Georgian bay, to be put into winter quarters.

## ‘QUADRA.’

The *Quadra* is an iron steamer 174 feet long, 31.1 feet in breadth, and 13.6 feet in depth. Her gross tonnage is 573.30, and her registered tonnage 265.25. This steamer was commanded by Captain John T. Walbran, and has a crew of 21 all told.

On July 1, 1902, the *Quadra* was engaged in the lighthouse service between Victoria and Vancouver. The steamer continued in the lighthouse and buoy service until September 10, then some hydrographic surveys were made with Col. Anderson, chief engineer of the department, Captain Gaudin and Mr. Denison, on board. A site was also selected on this trip for Leonard island lighthouse. The steamer then resumed the lighthouse service and continued delivering supplies and taking material for different stations up to October 8, when the Hon. Mr. Blair, Minister of Railways and Canals, was taken on board, and visited several points in British Columbia waters. On October 10, the steamer again entered upon the lighthouse service and was engaged in it until October 29, when the crew was engaged in building a beacon at Kynumt. On the 30th the steamer entered the fisheries protection service and on October 31, resumed the building of a beacon.

On November 1, the *Quadra* again took up the lighthouse service and continued in it until December 2, when she was engaged in a special service of conveying Mr. Keefer, resident engineer of the Public Works Department and Messrs. Meyer and Johnson to Port Hardy, to examine the site for a proposed wharf and to take the necessary soundings. The *Quadra* returned to Victoria, having completed the special service on December 10. The lighthouse and buoy service was then resumed and the steamer continued in that service until January 3. The special service was then performed, of conveying the returning officers in connection with the election in Burrard electoral district, going as far north as Port Simpson, and this service was completed on January 17. The steamer then resumed her work of visiting lighthouses, with the agent of the department on board. On January 22, the steamer took on board returning officer Mowatt and other government officers employed in connection with the election, the steamer going again as far as Port Simpson.

This special service was completed on February 16, and the steamer was put in winter quarters for the usual annual overhauling of the machinery, painting of frames and inside, generally. The work was performed by the crew and on March 16, the steamer was again put in commission in the lighthouse service. On March 30, the *Quadra* conveyed the labour commissioners to investigate the labour trouble in British Columbia. Professor Klotz, astronomer of the Canadian Government, was taken to



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Bamfield on March 30. On April 4, the steamer resumed the lighthouse service and continued in it until she was put in the graving dock on May 9. The bottom of the steamer was examined and beyond a small amount of slime it was found to be in perfect condition, the composition used having formed an enamel which preserved the plating. On May 16, she left the dock, and on the 18th the steamer was employed in special service, conveying Judge Hunter and party to hold an investigation into the labour troubles, and the steamer was engaged in this work until June 2, the lighthouse and buoy service was then taken up and the steamer was employed in it until July 1.

‘ SCOUT. ’

The steamer *Scout* was transferred from the Department of Railways and Canals to this department, and was used one season in connection with the buoy service, between Montreal and Kingston. This steamer was not considered of sufficient length nor power, for the work for which she is required.

Tenders were invited for lengthening the steamer 25 feet, and building a stem of a different model from the bow which the steamer had when handed over. Tenders were received for lengthening the hull, and a contract was entered into with the Davis Dry Dock Company of Kingston, for the sum of \$6,000.00. Steel side arches were placed in the steamer and a fore-castle mess-room. Improvements were also made to the cabin.

Two new fore and aft compound engines were placed in the steamer, at a cost of \$3,300 in cash and the delivery of the old engines to the contractors as part payment.

The steamer has an electric lighting plant and a search light, which was put in at a cost of \$1,600.

The steamer began her work on April 20, 1903 and continued in the service of attending to the gas buoys and charging them, until the close of the season of navigation. The *Scout* has been found to be suitable for the service since the above alterations were made.

The dimensions of the *Scout* are now as follows:—Length 103·6, breadth 25·6, depth 9·2, gross tonnage 175·65 and registered tonnage 69·85.

‘ RESERVE. ’

The *Reserve* is a small steamer 48·74 gross tonnage and 35·71 registered tonnage. She has a high pressure engine. Diameter of cylinder 13 inches, length of stroke 14 inches and is 30 horse power. Her length is 61·08 feet, breadth 15·03, draught 5½ feet. This steamer was formerly called the *Alaska* but her name has been changed to the *Reserve*. This steamer is used for sweeping the river reaches between Montreal and Kingston, and is also used for towing a scow employed for the placing of buoys in position. The *Reserve* was purchased for the sum of \$3,000.00 and is in good condition and suitable for the class of work for which she has been purchased.

It was found necessary to employ a steamer of light draught to sweep the channels.

‘ OLD BAYFIELD. ’

The *Old Bayfield*, which had been employed in surveying Georgian bay, Lake Huron, Lake Ontario and Lake Erie, was no longer suitable for the work and the



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department accepted an offer of \$3,250 for the steamer. Before selling her an inspection was made of the machinery and hull, and it was found that a large amount of money would have to be expended to make her suitable for the department's service. In addition to this the steamer was entirely too small for Lake Superior.

The *Old Bayfield* was built in 1863 and purchased by the department in 1884.

## ‘MAISONNEUVE.’

The *Maisonneuve*, formerly named the *Gladys*, is a screw boat 75·7 feet in length, 9·7 feet main breadth, and 7·3 feet depth of hold. The engines are compound, diameter of cylinders 7 $\frac{5}{8}$  and 14 inches, length of stroke 14 inches and horse power 9. The tonnage of this steamer is 26·01 gross and 17·69 registered.

The steamer was purchased with all equipment, boats, outfit, apparel and machinery complete for the sum of \$8,500. The *Maisonneuve* is employed in patrolling the channel between Quebec and Montreal, for the purpose of ascertaining if the buoys are in position and notifying the officers and crew of the *Shamrock*, respecting any displacement of the buoys or changes necessary. The *Shamrock* is equipped with all the machinery necessary for lifting and placing buoys and is constantly engaged in this work.

## ‘VIATOR.’

The *Viator* is a gasoline launch 41 feet 6 inches in length, beam 5 feet, draught under wheel 2 feet eight inches, her engine is a two cylinder gasoline engine and the launch has a speed of 16 miles per hour.

This launch was provided for patrol service on the St. Lawrence river, between Montreal and Kingston. The purchase of this boat was considered necessary to patrol the buoy service so that the *Scout*, which is engaged in the heavier class of work of placing, replacing and taking up buoys, might be enabled to carry on her own work without interruption. The price paid was \$2,150.

The *Viator* can be used when required for fishery protection service on the upper lakes, and probably will be occasionally.

## ‘SHAMROCK.’

The *Shamrock* is a steam barge 117 feet long, 25 feet in breadth and 9 feet 7 inches in depth. Her gross tonnage is 237 and her net tonnage 161. The *Shamrock* has a crew of 12 all told including Mr. U. P. Boucher, buoy engineer, who is in charge of the steamer and directs her movements.

This steamer is employed in the buoy service between Montreal and Quebec on the St. Lawrence river; her captain is S. Savaugau.

The *Shamrock* while in winter quarters at Sorel was overhauled and the necessary repairs made to her for the spring work. The steamer began the service on the St. Lawrence river by placing the buoys between Montreal and Sorel. The work was continued throughout the season. In addition to the buoy service material was carried for building lighthouses.



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In September the steamer was put in a dry-dock for repairs to her screw and her stern was sheeted at the water line, as was done with the bow in 1901.

The *Shamrock* continued in her work until the 2nd December when she was taken to winter quarters.

STATEMENT showing cost of maintaining Dominion Steamers, Marine Branch, from 1884 to 1903.

Year.	Cost of Maintenance.	Year.	Cost of Maintenance.
	\$ cts.		\$ cts.
1883-84. . . . .	122,816 25	1893-94. . . . .	142,487 42
1884-85. . . . .	148,864 26	1894-95. . . . .	129,899 80
1885-86. . . . .	130,759 83	1895-96. . . . .	150,519 41
1886-87. . . . .	141,424 42	1896-97. . . . .	136,940 11
1887-88. . . . .	150,659 19	1897-98. . . . .	117,644 39
1888-89. . . . .	126,629 33	1898-99. . . . .	145,270 75
1889-90. . . . .	114,959 20	1899-1900. . . . .	180,975 45
1890-91. . . . .	111,437 03	1900-1901. . . . .	195,484 75
1891-92. . . . .	127,406 28	1901-1902. . . . .	241,060 98
1892-93. . . . .	146,521 77	1902-1903. . . . .	279,348 06

WINTER STEAMERS AND ROUTES.

In the season of 1902, it was determined by the Minister of Marine and Fisheries, to continue the experiment of keeping up winter communication between Summerside, P.E.I., and Cape Tormentine, N.B. The *Stanley* was placed upon the route on the 18th December and continued making return trips until the 10th January, 1903. The steamer left Summerside wharf on the 12th January and with great difficulty got outside the harbour. Several hours were occupied in making six miles progress. Large quantities of ice came down the Gulf of St. Lawrence, the steamer was forced into the board ice off Sea Cow head and was unable to make further way.

Efforts were made to release her from the ice bound condition, but they were ineffectual. The ice had packed around and under the steamer, making it impossible to use her propeller. On the 14th January, a large portion of the shore ice broke off and carried the steamer out into the strait. By the influence of the wind and tide, the *Stanley* was driven backwards and forwards until the 17th March, and was only saved from going ashore by the heavy ice which had packed around her.

The captain had very favourable opportunities for observing the ice and weather conditions, in the vicinity of Cape Tormentine and Summerside harbour, and in fact in all parts of the strait as far east as Merigomish.

Several ineffectual attempts were made to release the *Stanley* by dynamite sent from the shore.

The *Minto*, on the 12th February, was enabled to land coal and supplies within a mile of the *Stanley*, and these were taken on board. On the 28th February, the *Minto* made another effort to reach the *Stanley*, but in doing so, her propeller blades were stripped and she became helpless.



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On the 18th March, the *Stanley* through the efforts of both crews of the steamers, assisted by mild weather, was released from her ice bound position and towed the *Minto* into Pictou harbour, where the *Minto's* propeller blades were renewed.

The promise had been made in parliament, by yourself, to visit Prince Edward Island and go over the routes taken by the steamers in keeping up communication. In accompanying you from Ottawa on the 28th November, I was enabled to go from Pictou on board the *Minto* to Charlottetown, Summerside and Cape Tormentine, visiting also Georgetown.

The report made to you, is herewith subjoined, respecting the trip of inspection.

Honourable RAYMOND PREFONTAINE,  
Minister of Marine and Fisheries,  
Ottawa.

SIR,—Having had the advantage of accompanying you in the steamer *Minto*, on your trip of inspection of the water routes between the mainland and Prince Edward Island, I have the honour to report that I carefully observed the geographical situation of the several harbours on both sides of the strait of Northumberland, between which the *Minto* and *Stanley* have been plying in the winter seasons.

I have also had the advantage of joining in the discussions, and hearing the representations based on resolutions passed at the meetings of the Boards of Trade at Pictou, Charlottetown, Georgetown and Summerside, called for the purpose of meeting you and where the views of the representative public and business men, were expressed upon the subject of the several routes advocated.

In addition to the favourable opportunities thus offered I met the agent and other officers of the Marine and Fisheries department, and captains Finlayson and Brown, and procured from them their opinions upon the most advantageous and practicable routes, to decide upon for the coming winter.

They had no hesitation in saying that it is only possible to keep up communication between Summerside and Cape Tormentine, in exceptionally mild winters, but during ordinary winters, the route for either the *Stanley* or *Minto* is impracticable. The dangers which the steamers are exposed to from limited sea-room, when the ice accumulates in large bodies, are great, moreover, the harbour of Summerside is difficult of access when the ice is made, owing to a rather narrow channel which steamers of the draught of the *Stanley* must make, or ground.

The pier at Cape Tormentine, is exposed at the outer end, and only under favourable ice conditions can a steamer land and unload or load cargo.

At the meetings of the Boards of Trade of Pictou and Charlottetown, and associations of King's County, the resolutions were strongly in favour of placing the steamers on the most convenient and advantageous routes for the Island as a whole, but none of the resolutions were in favour of the Summerside-Cape Tormentine route, with the exception of the one passed by the Summerside Board of Trade.

From the many opportunities of gaining information afforded by coming in contact with the business men engaged in shipping produce and other materials, and importers of goods on Prince Edward Island, I could not fail to see that the preponderance of opinion was against experimenting with the Summerside-Cape Tormentine route, with the present facilities for keeping up regular winter service.

The experience of last winter leaves no room for discussion, about the disastrous effects upon trade and passenger traffic, caused by the unfortunate interruption of the communication between Summerside and Cape Tormentine, and, due to the sudden appearance of immense bodies of floating ice in the vicinity of Summerside, and in the Northumberland strait.

From a careful study of the events connected with last winter's effort to keep up communication between Summerside and the mainland, I am satisfied that the difficulties were insurmountable, and that Captain Brown was not responsible for the ice-bound



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condition in which the *Stanley* was placed, but showed diligence and caution in the discharge of his duties, and suffered much hardship from his ceaseless efforts to free the *Stanley* during the two months the vessel was drifting back and forth in the strait.

Respectfully submitted,

F. GOURDEAU.

## ICE BOAT SERVICE BETWEEN CAPES TRAVERSE AND TORMENTINE.

The crews of the ice boats were engaged in the early part of February, and made their first crossing on the 5th of February. Four boats left Cape Traverse and four boats left Cape Tormentine and continued on the route up to the 24th of March, when the mails were transferred to the Georgetown route.

Eight boats, with six men to each boat, were constantly kept crossing on the ice in the straits, four leaving one side in the morning and four leaving the other side, generally meeting about mid-straits.

The quantity of mail matter allowed to each boat was 500 lbs., but that weight was not carried at each crossing unless the mails were exceedingly heavy. The outgoing mails from Prince Edward Island rarely exceeded 1,200 lbs. per trip of the boats.

The gross earnings of all the boats amounted to \$615.25, and the expenditure was \$6,211.28. This included the cost of conveying the mails and ice boats from the point where they landed on the shore ice, to the boat houses.

Passengers carried during the two months.....	246
Pounds of mail carried .....	103,950
Pounds of baggage carried.....	775

## LIFE BOAT STATIONS.

There are 28 life-saving stations in the Dominion of Canada. Most of these have crews that drill twice or three times a month, in the majority of cases twice a month. The men are paid \$2 for each drill and, an extra sum is paid when any service is rendered to shipwrecked mariners.

At Long Point, Lake Erie, the men are permanently stationed during the months of September, October and November, at the life-saving station, which is well equipped for their accommodation and for the accommodation of those who may be rescued. The men receive \$40 per month during the three months, and are paid for weekly drills during the other months of the season of navigation.

CONSECON.—The crew at Consecon were notified that a steam barge near Presqu'Île was in distress. The life boat was taken 12 miles by teams and launched, but owing to darkness, the barge could not be found. Nothing further was heard as to the cause of the barge being in distress. The coxswain and life-boat crew were paid for extra service.

PORT STANLEY.—A new surf boat with oars was supplied this station. Instructions were given to level up the life-boat house which had settled in the centre. The rescue of the crew of the *Mineral State*, by the crew of the Port Stanley life-saving station, was referred to in last year's report. The American government, bestowed testimonials duly



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inscribed, a gold watch and chain to the coxswain of the life-boat and to each of the crew, a gold medal. The captain of the tug *Gordon Brown*, which assisted the life-boat crew, was awarded a gold watch and chain. These rewards were presented to the men by Mrs. Wilson wife of Dr. Wilson of St. Thomas. The presentation was prefaced by some remarks by Col. Burke, United States Consul.

KINCARDINE, Ont.—A life-saving station was established at Kincardine, Ont., during the season of 1903. The site selected for the station is on the corner of the dock on the opposite side of the small stream which flows past the lighthouse. Tenders were invited for the construction of a boat-house and the tender of Mr. John Watson for \$458 was accepted and a contract entered into and completed. Thomas McGaw is coxswain of the crew and there are six men with him, making a total of seven. A life-boat was built at Collingwood and sent to Kincardine.

YARMOUTH, N.S.—The schooner *M. J. Solay* was stranded on Cape Fourchu on November 31, 1902. The coxswain and crew of the Yarmouth life boat went to the assistance of the crew of the schooner and were allowed one drill for the service.

HERRING COVE, N.S.—The station has been much improved and protected by the breakwater, recently completed to seaward of the boat house, and the renewal of the launching ways. A new Beebe-McLellan self-righting boat is in course of construction, by Mr. John Morrison, of Shelburne, and will be sent to Herring Cove when completed.

DUNCAN'S COVE, N.S.—A new self-bailing surf boat has been supplied this station.

SCATTARIE, N.S.—A new self-bailing surf boat has been supplied Scattarie station.

SEAL ISLAND, N.S.—The small life boat, found to be unseaworthy and faulty in construction, has been condemned and replaced by a new Beebe-McLellan self-righting boat.

By referring to Appendix No. 8, a report from Captain Bloomfield Douglas will be found, and a statement of all the life boats and stations attached.

## METEOROLOGICAL SERVICE.

Three new stations were established in British Columbia, nine in the North-west Territories, twelve in Ontario, three in Quebec, one in Nova Scotia, and one in Davis Strait, Labrador.

There are now 338 stations in the Dominion, Newfoundland and Bermuda using instruments supplied by the Canadian Government. At 256 stations, the observations are taken voluntarily, sending regular monthly returns to the central office. At 42 stations lying chiefly in the far northern territories of Canada, and at lighthouses in the Gulf of St. Lawrence small gratuities are allowed observers. At 40 stations distributed at nearly equal intervals throughout the Dominion, three or more observations are taken daily, and the observers are paid salaries. From 36 of these stations two reports each day are telegraphed to Toronto, to be used in the preparation of the daily weather chart.

Climatological reports are published, each report containing a meteorological summary from nearly 350 stations. An annual meteorological summary is also published for Toronto, a monthly weather review for the Dominion and a monthly weather chart.



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Forecasts are of greatest interest to the public and are now issued for all parts of the Dominion, and storm signals have been hoisted at nearly every port, both on the seaboard and on the Great Lakes.

While forecasts and storm warnings, working on fairly established lines is given every attention, research work and investigation of magnetic changes and meteorological phenomena is steadily pursued.

The forecasts and storm warnings have been maintained during the year and 1,190 warnings from Toronto sent, and of these 1,104 or 92·8 per cent were verified. The storm warnings are appreciated by mariners and the forecasts of weather have been considered valuable by forwarders.

Seismological observations have been made by keeping in operation the seismographs in Toronto and Victoria. The work in connection with the magnetic observatory at Toronto, as well as the other operations of the meteorological service, are recorded in detail in the report of R. F. Stupart forming Appendix No. 6, of this report.

### SIGNAL SERVICE.

The reports of the Superintendents of the Signal Service at Quebec and Halifax, contain information for mariners. Mr. J. U. Gregory is superintendent of the service at Quebec and Lieut. George Butler, superintendent of the service at Halifax.

Arrangements have been completed between the government of Canada and the Society of Lloyds, whereby the following signal stations, maintained by the Dominion of Canada, have been included in Lloyds system of reporting stations. Orders forwarded to Lloyds, can be notified to vessels by means of these signal stations, on the same terms and conditions as observations at Lloyds signal stations and vessels signalling to these Canadian signal stations, will be reported to Lloyds for insertion in the Lloyds List and Shipping Gazette, and daily press, in the same manner as reports from Lloyds signal stations.

#### LIST OF STATIONS.

Belle Isle,	Chateau Bay,
Cape Ray, Newfoundland,	South-west Point, Anticosti,
St. Paul's Island, Cape Breton,	West Point                   “
Cape St. Lawrence,	Cape Rosier, Gaspé coast,
Heath Point, Anticosti,	Fame Point               “
Amherst Island, Magdalen Isds.,	Cape Magdalen       “
Point Amour, Forteau,	South Point           “

The government has had under consideration the matter of night signals. Application has been made by ship-owners for this service and their request is now under consideration. Some further information on the subject will be necessary, before establishing the service.

The government telegraph system was, during the season of 1901, extended along the north coast of the Gulf of St. Lawrence to the strait of Belle Isle, and Belle Isle was connected by cable with the shore telegraph system.



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Arrangements have been completed by the Department of Marine and Fisheries, whereby all inward bound vessels, showing their official numbers, will be reported from marine signal stations in the river and gulf of St. Lawrence immediately, and all reports will be promptly posted on the bulletin board of the Great North-western Telegraph Company's office in St. Peter Street, Quebec, and on that of the Board of Trade in Montreal.

Weather and ice reports will be forwarded twice a day, as formerly; and similarly posted.

Arrangements have also been made for repeating all reports received to the pilot station at Father Point, so that pilots will be promptly advised of the locality of inward bound vessels.

A telegraph station was established by the government of Canada at the light-house at Point Amour, and included in the list of marine signal stations from which reports will be posted at Quebec and Montreal.

Wireless telegraph stations have been established by the Marconi Wireless Telegraph Company (Ltd.) at Belle Isle and Chateau bay, and these stations have been included in the list of marine signal stations.

The reports of the superintendents will be found as an appendix to this report.

## WRECKS AND CASUALTIES.

The total number of casualties to British and Canadian sea-going vessels reported to the department, as having occurred in Canadian waters and to Canadian sea-going vessels in waters other than those of Canada, during the twelve months ended June 30, 1903, was 237, representing a tonnage of 162,297 tons register, and the amount of loss both partial and total, to vessels and cargoes as far as ascertained was \$409,991. The number of casualties to inland vessels so far as have been reported, were slight and unimportant.

The number of lives reported lost in connection with the casualties was 32. A statement of the wrecks and casualties will be found in supplement No. 1 to this report.

## CASUALTIES IN RIVER AND GULF OF ST. LAWRENCE.

Formal investigations were held into accidents to the following vessels :—SS. *Carrigan Head*, ss. *Iberian*, ss. *Protector*, ss. *Stord*, barque *Sardhana*, steam tug *Mersey*, ss. *Manchester Trader*, ss. *Dominion*, ss. *Dominion*, and ss. *Bergenhuis*.

On account of the witnesses not being available the undermentioned casualties were not investigated :—SS. *Norwegian*, ss. *Loughrig-Home*, ss. *Hibernian*, ss. *Lake Manitola*, ss. *Mount Royal*, ss. *Pomeranian*, ship *Alacrite* and ss. *Topaze*.

Of the ten casualties investigated the masters were responsible for four, pilots for three, and three may be classified as due to the perils of navigation.

The object of holding these investigations has been to show where the responsibility for the casualties rests. The department has been of late years putting forth great efforts to make the St. Lawrence route a safe one for ocean going vessels. It has always



been believed in the department, that many accidents have occurred through carelessness on the part of captains and pilots, while in the comparatively quiet waters of the river. This view was not far wrong as was proven by the investigations into casualties in 1902, the report of which was published in the report of that year and also by report of the commissioners for 1903. There is a strong desire to show to the shipping interests that the responsibility of casualties should remain where it belongs. In the year 1902 the casualties were not due to ineffective aids to navigation, nor ineffectual equipment of the vessels, but to ignorance and carelessness on the part of the ship-masters and pilots. Punishment has been meted out to the captains and pilots by suspension of their certificates.

For the more effective working of the 'Shipping Casualties Act,' some important changes were made which are as follows :—

No. 1. The minister may appoint a commissioner to hold formal investigations in place of the necessity for a separate commission being issued for each casualty, as required before.

No. 2. A statement of the case need not be issued as heretofore, before the commencement of the proceedings, where a certificate is to be dealt with. The defendant's certificate may be cancelled or suspended, after he has been furnished with a copy of the report or statement of the case, and had an opportunity of making a defence.

No. 3. An investigation may be held into the stranding of any vessel whether damaged or not.

Captains Archibald Reid and John Temple, have been appointed assessors for a term of three years, and Lieut. Salmon has been appointed a commissioner to hold investigations into shipping casualties.

The report of Commissioner Salmon and the assessors, of the investigations into the cause of the accidents to shipping in the river and gulf of St. Lawrence, with the evidence, is printed in Appendix No. 4 of this report.

### LIVE STOCK SHIPMENTS.

Mr. E. B. Morgan who was associated with Mr. George Pope as inspector of live stock shipments died on the 10th Dec., 1902, and Mr. Delorme was appointed in his place. The report of Messrs. Pope and Delorme shows that the total number of cattle shipped up to the 24th November, from the port of Montreal to Europe, for the year 1903, was 147,201, sheep 61,017. This is the largest shipment of cattle in the history of the port. The number of horses shipped from the same port during 1903, was 373.

From St. John, N.B., 37,453 cattle were shipped, 19,310 sheep, and 115 horses.

From Halifax, between January 15, and November 30, 3,856 cattle, 426 sheep and 17 horses were shipped.

From Charlottetown, 1,928 sheep were shipped to Europe, but a very much larger number was shipped to the United States which did not come under inspection of shipment of live stock by the officers of this department.

Total from all these ports for European ports, 188,510 cattle, 82,671 sheep and 505 horses.

The shipments in detail will be found in Appendix No. 13, to this report.



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## MONTREAL OFFICES.

The quarters occupied by the steamboat inspectors, live stock inspectors, and other officers of the department were limited, and it was found necessary to procure better accommodation for the officers of the outside service in Montreal.

The Boyer block has been leased for a term of five years at \$2,000 per annum, payable quarterly. This building is a stone building, four stories high, on the corner of Commissioner street and Place Royale square, bearing the Numbers 219, 223 and 225, on Commissioner Street and Number 1 on Place Royale Square.

There are seven rooms on the ground floor and seven on the first floor. The offices were fitted up and also a small court room for the investigation into accidents caused by pilots. There is also an office which will be fitted up for the accommodation of the Minister when in Montreal, attending to official duties.

The steamboat inspectors, live stock inspectors and U. P. Boucher, buoy engineer on the St. Lawrence river, have offices in this building.

## NEW LIGHTSHIPS.

The St. John Board of Trade forwarded to the Department of Marine and Fisheries, a memorandum requesting that a lightship, be moored on the dangerous shoals in the Bay of Fundy known as the Lurcher shoals. These shoals lay directly in the course of all vessels entering the Bay of Fundy from the eastward. They are a standing cause of dread to captains while making the entrance into the bay.

Application was also made by the shipping interest concerned in navigation in the gulf and river St. Lawrence, for a lightship to be placed on the north east coast of Anticosti island.

The matter had received due consideration in the department since 1897. Plans and specifications of different lightships of the United States and other places were examined, and it was decided to adopt the plans and specifications similar to those in position on the Atlantic coast in the United States, which had been tried and found successful in withstanding the storms, and of great assistance to the navigation in the waters of the United States.

Tenders were invited for the construction of two lightships, and several were received. The tender of the Polson Iron Works, Toronto, for \$179,950.00 for the two lightships, being the lowest, was accepted.

The length of each lightship is 112 feet, breadth moulded 28 feet 6 inches, depth of hold from top of main deck beam amidships, 14 feet 10½ inches. They are fitted up with auxiliary engines and machinery for propelling themselves. The hulls are of steel and each lightship has two masts and no bowsprit.

Owing to strikes in the shipyard and difficulty in getting material, due also to strikes, the lightships were not completed at the time specified in the contract.

The lightship for the Lurcher shoals in the Bay, of Fundy, left Toronto for Quebec on the 26th November, 1903, and was taken to Quebec to, be completed. It was considered important that this lightship should be moored near the shoals this winter, to assist ocean going and other vessels navigating the Bay of Fundy during the winter.



Some work was done at Quebec and the vessel proceeded to Halifax, where additional work was done at the expense of the contractors, who sent workmen on board the lightship.

The Lurcher lightship was placed in position on February 8, 1904. She is supplied with heavy mushroom and other anchors and stud link chain, tested by Lloyds.

This lightship is now moored off Lurcher shoal, about 16 miles outside of Yarmouth in about 36 fathoms, 2 miles west of the 1½ fathom spot now marked by a whistling buoy.

Lat.....N.	43°	49′	32″
Long.....W.	66	32	0

Three seventh order lens lanterns encircle each mast head, at an elevation of 60 feet above the water. From them occulting electric lights, showing bright for 8 seconds and eclipsed for 4 seconds, alternately, will be exhibited. These should be visible 13 miles from all points of approach. If from any cause the electric light apparatus should become inoperative, fixed white oil lights, of less intensity, will be shown.

A diaphone, operated by compressed air, will be used as a fog alarm. This is similar in sound to a siren, but gives a note of great intensity and uniform pitch. It will give blasts of 4 seconds' duration, with intervals of 56 seconds between the blasts. Should it become disabled, blasts of similar duration and frequency will be sounded through a whistle. Should both from any cause become inoperative a bell will be rung by hand.

The other lightship is drawing near completion, and will be placed in the spring on the northeast of Anticosti island.

COASTING TRADE OF CANADA.

By the provisions of chapter 83, Consolidated Statutes of Canada, being an Act respecting the Coasting Trade of Canada, no goods or passengers can be carried by water from one port in Canada to another except in British ships, but the Governor in Council may from time to time declare that the Act shall not apply to ships or vessels of any foreign country in which British ships are admitted to the coasting trade of such country, and to carry goods and passengers from one port or place to another in such country. The Parliament of Canada was empowered to pass the Act alluded to under the provisions of the Imperial Act 32 Vic., chapter 11, intituled: An Act to amend the law relating to the Coasting Trade and Merchant Shipping in British Possessions, which came into operation in this country on its proclamation by the Governor General on October 23, 1869.

It was ascertained that the following countries, viz., Italy, Germany, the Netherlands, Sweden and Norway, Austro-Hungary, Denmark, Belgium and the Argentine Republic allowed British ships or vessels to participate in their coasting trade on the same footing as their own national vessels;—the ships of Italy, by Order in Council of August 13, 1873; those of Germany, by Order in Council of May 14, 1874; those of the Netherlands, by Order in Council of September 9, 1874; those of Sweden and Norway, by Order in Council of November 5, 1874; those of Austro-Hungary, by Order in Council of June 1, 1876; those of Denmark, by Order in Council of January 25, 1877; those of Belgium, by Order in Council of September 30, 1879; and those of the Argen-



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tine Republic, by Order in Council of May 18, 1881, were admitted to the coasting trade of Canada.

The following Act, entitled an Act respecting the Coasting Trade of Canada, was assented to 15th May, 1902, and relates to the payment of duty on foreign-built British ships :—

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows :

1. In this Act, unless the context otherwise requires, the expression ‘ British ships ’ means and includes all ships belonging wholly to persons qualified or entitled to be owners of British ships, under the provisions of ‘ The Merchant Shipping Act, 1894,’ or any other Act of the Parliament of the United Kingdom in that behalf in force for the time being.

(2.) For all purposes of this Act the expression ‘ the coasting trade of Canada ’ shall be deemed to include the carriage by water of goods or passengers from one port or place in Canada to another port or place in Canada.

2. No foreign-built British ship, whether registered in Canada or elsewhere, shall be entitled to engage or take part in the coasting trade of Canada, unless such foreign-built British ship has first obtained a license for that purpose, which may be granted by the Minister of Customs.

(2.) The Minister of Customs shall issue such license to any foreign-built British ship, whether registered in Canada or elsewhere, upon application therefor and upon the payment of a duty of twenty-five per cent ad valorem on the fair market value of the hull, rigging, machinery, boilers, furniture and appurtenances of such ship.

(3.) This section shall not apply to any foreign-built British ship registered as a British ship prior to the first day of September, 1902.

3. No goods or passengers shall be carried by water, from one port of Canada to another, except in British ships ; and if any goods or passengers are so carried, as aforesaid, contrary to this Act, the master of the ship or vessel so carrying them shall incur a penalty of four hundred dollars : and any goods so carried shall be forfeited, as smuggled ; and such ship or vessel may be detained by the collector of customs, at any port or place to which such goods or passengers are brought, until such penalty is paid, or security for the payment thereof given to his satisfaction, and until such goods are delivered up to him, to be dealt with as goods forfeited under the provisions of the Customs Act.

4. The master of any steam vessel, not being a British ship, engaged, or having been engaged, in towing any ship, vessel or raft, from one port or place in Canada to another, except in case of distress, shall incur a penalty of four hundred dollars ; and such steam vessel may be detained by the collector of customs at any port or place to or in which such ship, vessel or raft is towed, until such penalty is paid.

5. Penalties and forfeitures under this Act may be recovered and enforced in the manner provided by *The Customs Act*, with respect to penalties and forfeitures incurred under it, and as if imposed by it ; and this Act shall accordingly be construed with reference to the said Act, and as forming one Act with it, and all words and expressions in this Act shall have the same meaning as the like words and expressions in the said Act.



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6. The Governor in Council may, from time to time, declare that the foregoing provisions of this Act shall not apply to the ships or vessels of any foreign country in which British ships are admitted to the coasting trade of such country, and to carry goods and passengers from one port or place to another in such country.

7. Where by treaty made before the passing of 'The Merchant Shipping (Colonial) Act, 1869,' (that is to say before the thirteenth day of May, eighteen hundred and sixty-nine,) Her late Majesty, Queen Victoria, agreed to grant to any ships of any foreign state any rights or privileges in respect of the coasting trade of Canada, those rights and privileges shall be enjoyed by those ships for so long as Her late Majesty agreed, or His Majesty the King may hereafter agree, to grant them.

8. Chapter 83 of the Revised Statutes is repealed.

### SUBMARINE SIGNALLING.

Submarine signalling is now receiving the attention of the department. This method of conveying warnings has been tested in the United States and it is claimed for it, that in cases where wind or thick folds of mist interfere with fog signals, that submarine signalling is more effective than fog-horns or other methods of warning.

The idea of making use of the water as a means of transmitting sound signals, appears to be a new field, and due consideration will be given the matter before any action is taken by the department.

I accompanied you to Boston, for the purpose of studying the submarine bell signals with several gentlemen connected with steamship lines. The test was made when six miles away from Vinyard sound, Pollock Rip and Boston lightship. With a view of still further studying submarine bell signals, officers of the department were sent to Vinyard sound and their reports on the whole question are now under consideration, but before any action will be taken by the department the whole system will be thoroughly studied.

In connection with submarine signals, it should be borne in mind, that ships must be equipped with receiving apparatus to be able to make use of the warning signals.

### ACETYLENE LIGHTING BETWEEN MONTREAL AND KINGSTON.

With a view of securing the best illuminant for the gas buoys that have been placed between Montreal and Kingston, experiments have been made with acetylene gas. Difficulties have arisen from time to time in transporting pintsch or oil gas from Montreal or Quebec to the buoys and it was assumed that the use of acetylene gas would enable the department, to a large extent, to increase the gas buoys and supply them with gas more effectively, than from Montreal.

In August, 1902, experiments were carried out on board the *Scout*, to determine the suitability of acetylene gas for the lighthouse and buoy service. A temporary generating plant was erected and though crude, worked perfectly up to the fall of 1902.



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Other experiments were made by mixing oil-gas and acetylene and experiments with pure acetylene but some difficulty having arisen with the burners, a new burner was introduced.

New acetylene apparatus was designed and put in operation in 1903. The result of the experiments has been to increase the candle power five times by the substitution of acetylene for oil gas.

A temporary depot was established at Morrisburg in November, 1902, but it has been found more convenient to have a depot at Prescott, and one has been established at the latter place which will be known as the Dominion Lighthouse Depot. Special apparatus for the lighthouse service will be made at this depot and distributed.

On the opening of navigation of 1903, a gas store holder and gas buoy lantern were placed at Stone House Point and appears to have worked satisfactorily during the season.

Welded steel storeholders have been provided for the lights in this division. They are 20 feet long, 50 inches in diameter and hold nearly 4,000 feet of gas at 15 atmospheres. The larger part of these are placed and will be connected with special lanterns and lighted on the opening of navigation.

The dredged cut at the foot of Wolf Island was completed by the Department of Public Works, and a red gas buoy and black spar buoy were placed to mark the cut. Deep draught boats from Kingston can now enter the American channel without going around the head of Wolf Island.

The department has now under consideration some surveys of Lake St. Francis, Lake St. Louis and the St. Lawrence River between Cornwall and Prescott. It is probable that plans will be made for placing the buoys by means of sextant angles after the surveys are completed.

Mr. J. F. Fraser has been appointed engineer in charge of aids to navigation in the Department of Marine and Fisheries. His report on the subject of the use of acetylene and the establishment of gas buoys between Montreal and Kingston forms appendix No. 5 to this report.

#### REMOVAL OF OBSTRUCTIONS TO NAVIGATION.

The sum of \$1,000 was appropriated by Parliament for the removal of obstructions to navigation. By reference to the statement of expenditure it will be seen that the sum of \$682.98 was expended for the fiscal year. The department recovered during the year the sum of \$184.44, being settlement of the claim for the removal of the *Rothsay*, which was sunk in the vicinity of Brockville some years ago.

The department endeavours to recover from the owners of vessels the cost of removal of sunken wrecks and where the owners are worth anything, the money is frequently recovered.

A statement in detail of the work done will be found in the report of the chief engineer of this department under the heading of removal of obstructions.



## LEGISLATION.

During the session of 1903 the following Acts were passed and assented to :—

An Act to further amend the Act respecting the Safety of Ships.

An Act to amend the Steamboat Inspection Act, 1898.

An Act to amend the Act respecting Certificates to Masters and Mates of Ships.

An Act further to amend the Steamboat Inspection Act, 1898.

An Act to amend the Act respecting the Harbour of North Sydney in Nova Scotia.

An Act respecting the management and control of public and other works.

An Act respecting the Pilotage District of Montreal, and the Port and Pilotage District of Quebec.

An Act to amend the Shipping Casualties Act, 1901.

F. GOURDEAU, Lt.-Col.,  
*Deputy Minister of Marine and Fisheries.*

DEPARTMENT OF MARINE AND FISHERIES,  
OTTAWA, January, 1904.



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ANNUAL REPORT OF THE CHIEF ENGINEER OF THE DEPARTMENT  
OF MARINE AND FISHERIES.

The Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit a report of the work done in the several services under the supervision of this office during the twelve months ended November 30, 1903.

This embraces most of the technical work at departmental headquarters, including the construction of lighthouses, lightships, fog-alarms, buoys and beacons; the supervision of construction and repairs of lifeboats; the administration of the vote for the removal of wrecks and obstructions in navigable waters; tidal and current surveys; hydrographic surveys, and the publication, examination and correction of hydrographic charts; construction of and repairs to fish hatcheries and refrigerators; engineering points in connection with the construction and maintenance of fish-passes; supervision of surveys of oyster beds; examination of applications for foreshore, wharf and water lots as they affect the interests of navigation; preparation and publication of notices to mariners and hydrographic notes, &c. Up to November 5, 1903, it also included the maintenance of aids to navigation, and this report therefore includes work done under that head.

There are special staffs appointed for the tidal observation work and for the hydrographic survey work; the remainder of the work of the branch is attended to by the general staff of the office.

## STAFF.

I have again much pleasure in testifying to the good work done by my staff throughout the past year.

The great increase in the quantity of work required from this branch, noted in last year's report, continued during the past year, but has been to some extent lately relieved by the appointment, on November 5, 1903, of Mr. J. F. Fraser, engineer in charge of aids to navigation in the River St. Lawrence above Montreal, as Commissioner of Lighthouses, to administer that portion of the work which formerly came under my control as General Superintendent of Lighthouses. Mr. W. H. Noble, long my efficient foreman of works in charge of lighthouse construction and repairs was at the same time promoted to Assistant Commissioner of Lighthouses.

All my staff employed last year have been continued at work: Mr. Louis Hurtubise, appointed as draughtsman on July 1, 1903, at a salary of \$600, secured more lucrative employment from a railway company and left the office on September 12; Mr. J. L. Burnand was appointed a draughtsman on May 8, 1903, at \$500 per annum; and Mr. J. A. Léger has been employed as draughtsman since October 20, 1903, at \$800 per annum.

## OFFICE WORK.

A large proportion of the work done by the general staff of the branch consists in the construction and maintenance of light buildings, fog-alarms, buoys, beacons and other aids to navigation. Full details of the work done in this connection last year are contained in a separate report prepared by me, in my capacity of general superintendent of lighthouses, which is attached hereto. (Inclosure A.) All the work in connection with maintenance of lights will hereafter be transferred to the control of the Commissioner of Lighthouses.

Plans and specifications for all important new buildings and repairs, new vessels, buoys, &c., are made or approved in this office.



The following table indicates the work done in the draughting office during the twelve months ending November 30, 1903 :—

Description of Work.	Plans Designed.	Plans Received.	Copies. Made.
Lighthouse towers and dwellings.....	36	5	127
Fog alarm buildings.....	4		17
Details.....	34	19	93
Wharfs, piers, &c.....	2	1	8
Outbuildings.....	1		6
Buoys and apparatus.....	5	5	65
Machinery.....	7	33	20
Lanterns and illuminating apparatus.....	3	32	17
Fish and lobster hatcheries.....	2		13
Marine hospitals.....	1		7
Land surveys.....		13	55
Charts.....	2		3
Miscellaneous.....	10	85	111
Plans relating to foreshore.....		139	19
	107	332	561

Total plans for twelve months from December 1, 1902, to November 30, 1903.....	1,000
Charts received and recorded.....	55
" " entered in chart book.....	45
Photographs received and recorded.....	157
Specifications written.....	42
Notices to mariners issued (comprising 328 subjects).....	125

The work of issuing notices to mariners has continued very heavy, 125 notices embracing 328 subjects having been published. Some of these notices are long ones involving considerable labour in compilation, and embodying the results of surveys or inspections made by this branch. Amongst the most important of these may be mentioned a description of the aids to navigation in Lake St. Louis; sailing directions for Sable island, completely rewritten from the undersigned's survey of the island in 1899; full particulars respecting Collingwood harbour; improvement of aids to enter Halifax harbour; hydrographic notes respecting Smith inlet, B.C., written by Capt. Walbran; and several notices covering improvements made in the ship channel between Sorel and Montreal, to fit it for night navigation.

During the past twelve months, foreign notices were issued, covering 11 items relating to Newfoundland, 7 items relating to the Atlantic, 33 to the inland, and 18 to the Pacific waters of the United States, as well as 29 notices referring to transatlantic, and 4 to transpacific subjects.

The annual edition of the List of Lights and Fog signals in Canada, corrected to April 1, 1903, was issued on the 25th of that month.

The undersigned has been working on a list of buoys maintained in the river St. Lawrence below Quebec, and also on a complete list of buoys and beacons on the Pacific coast of Canada, and hopes to have both ready for publication soon after the new year. It is desirable that a complete list of buoys in the Dominion should be published regularly, as our list of lights is published, but there are many difficulties in the way of accomplishing this with the accuracy that would make it of any value; the method of maintaining many buoys under contract to suit local wants and the absence of a special hydrographic staff in my office, both militate against the proposition.

REMOVAL OF OBSTRUCTIONS.

During the past twelve months, the following work was done, under the vote for the removal of wrecks :



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The barque *Ashlow* formed an obstruction to navigation in Indian harbour, N.S. Tenders were invited and a contract entered into for \$100.00 and the wreck was successfully removed for that sum.

The *Bessie Carson* was sunk in the channel of the Magaguadavic river, N.B. Tenders were invited and a contract entered into for \$425.00; the work was successfully carried out.

Sunken saw-logs were removed from Tusket river at a cost of \$30.00.

The wrecked schooner *Marian* formed an obstruction to navigation about a mile southwest of New Campbellton, in Big Bras d'Or lake. This obstruction was removed under contract for \$120.00.

Sunken logs were removed from Bear River, N.S., at a cost of \$21.00 and logs were also removed from the St. John river, at a cost of \$21.00.

Captain E. Dunn, D.G.S. *Petrel* reports that he has been to the site of the wreck of the schooner *H. A. Barr* on the course between Southeast shoal lightship and Long point, Lake Erie, that he found the foretopmast floating with wire rigging attached to it but could find no other trace of the wreck. The rigging was cut adrift from the topmast and all evidence of the wreck has disappeared.

## BUOYAGE.

The buoy service in the Dominion received great attention during the last year and a large number of buoys was added to those already in position. Special attention has been given to gas and steel buoys, with a view of making them suitable for marking dangers and giving warning in time of fog and foul weather.

As stated in my report of last year, the *Scout* and a number of gas buoys were transferred to the Department of Marine and Fisheries, and the buoys were kept in position during the past season between Montreal and Kingston. The steamer *Scout* was lengthened 25 feet and new compound engines placed in her. There are 27 gas buoys between Montreal and Kingston and 14 between Montreal and Lake St. Peter, 19 in the Quebec agency, 1 in Pelee Passage, 1 at the mouth of the Detroit river, 3 in Parry Sound and 3 in Halifax harbour, making 68 in all, in position. The gas buoys between Montreal and Sorel were placed in position in the early part of November by the *Shamrock*, under the direction of U. P. Boucher.

Several contracts for buoy service including Lake St. Francis and Kingston terminated and were not renewed as the work of placing and taking up the buoys is done by the *Scout*.

There are now existing about 200 buoy contracts and the districts buoyed number about 340, the total number of buoys employed is about 3,600.

In addition to buoys placed in harbours, lakes and rivers, coast buoys are maintained by the departmental steamers. The system of lifting the large warning buoys every three months for examination of moorings and the condition of the buoys has been followed out in the Nova Scotia and Bay of Fundy districts.

The coast buoys in the Nova Scotia district number 23 automatic whistling, 3 gas buoys, 21 bell buoys and 145 steel can and conical buoys.

In the New Brunswick agency there are maintained 18 signal buoys, 16 steel can and conical buoys and 1 bell boat.

In Prince Edward Island there are 4 signal buoys and 5 steel conical buoys.

In British Columbia there are 3 signal buoys and a number of can and conical buoys, all maintained by the Government steamers *Quadra* and *Samson*. One contract exists for buoying Kootenay lake with platform buoys.

In Quebec there are 69 steel can and conical buoys, 2 warning buoys and 19 gas buoys, some of which are also signal buoys. These buoys are maintained by the *Druid*.

In Ontario there are 5 bell buoys and a number of conical and can buoys maintained under contract. Gas buoys as already stated, number 27 but a portion of these are in Lake St. Louis above Montreal.

The ship channel buoys, St. Lawrence river, were placed by the *Shamrock* in the early part of April last and were left in position until the latter part of November.



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Some of the buoys were not taken up until the 28th November. The buoys which had been sunk during the winter of 1902-3 to escape injury by running ice, were all recovered. These buoys had been frozen in in the fall of 1902 having been left in position to accommodate outgoing steamships but before they could be taken up heavy frost had set in and surrounded them with ice.

The maintenance of the buoy service, preparation of contracts, examination of accounts, and indeed all the work in connection with the construction of new buoys and the maintenance of all buoys except those looked after by Dominion steamers, has been most efficiently done by Mr. W. W. Stumbles, and involves an immense amount of detail.

#### HYDROGRAPHIC WORK.

The hydrographic survey of the Canadian shores of the great lakes has made fair progress during the season of 1903. Mr. W. J. Stewart, on the steamer *Bayfield* (formerly *Lord Stanley*) was not able to reach Lake Superior until the middle of June, when he began a survey of the north shore from the international boundary line near Pigeon river eastward including Thunder bay and the islands lying off it. A traverse of this shore and of the islands as far east as Thunder cape was completed and about half the area of it sounded.

As is usual, the triangulation points of the United States Corps of Engineers, that came in the district, were used as a basis for the triangulation of Thunder bay. These points were found upon Victoria island, Pie island and Thunder cape.

No new shoals were discovered during the season, but several were found to be incorrectly placed upon the existing charts. It may safely be said that, with the new chart, the inside channel between Port Arthur and Victoria island will be much more frequently used, as the dangers in it, when properly marked, are not serious. Preliminary sailing directions for this channel are being prepared.

After surveying the localities 3 buoys were placed on the shoals at Victoria island and one off Hare island, which were much appreciated by the masters passing.

Acting upon instructions, the survey built and maintained at the mouth of the dredged channel into Kaministiquia river, a platform buoy supporting a Wigham 31 day lamp, which proved a great boon to the large steamers frequenting Fort William.

Observations for the variation of the magnetic needle were taken at Fort William and it was found to be  $3^{\circ} 06.5$  easterly.

Mr. Stewart had as assistants during the season only some transient students. It is very desirable that assistants for this class of technical work should be men of scientific attainments, permanently employed, as their value increases greatly with their experience.

In April last a fair sheet of part of the east shore of Lake Superior, embracing the work of the season of 1902, was completed and forwarded to the Hydrographer of the Admiralty. It is hoped that this sheet will be ready for issue before the opening of navigation in 1904. In May, 1903, a coast chart of the east shore of Lake Huron, embraced between Goderich and Chantry island, was issued for sale. A chart of the whole lake showing the completed survey has also been issued.

A new and complete edition of the Georgian Bay and North Channel Pilot was issued in April, 1903, and has been in great demand.

The survey of Lake Winnipeg under Mr. F. Anderson assisted by Mr. R. E. Tyrwhitt using the chartered tug *Frank Burton*, has made good progress during the season. The various small harbours at Spider islands, Warren's Landing (entrance to Nelson river) and Selkirk island have been carefully examined and the narrow, crooked and none too deep entrances marked out by range beacons.

The open part of the lake has now been pretty thoroughly gone over, so that there is not much necessity for continuing the work at present.

A chart of the portion of Lake Winnipeg extending from the mouth of Red river northward to Berens river, embodying the results of the hydrographic survey made in 1901 by Mr. W. J. Stewart, was prepared, and instead of being sent to the Admiralty to be engraved it was photolithographed in Ottawa, to save time. The demand for this



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chart has been exceedingly small. It is hoped that a chart of the northern half of the lake will be ready for photo-lithographing before the opening of navigation in 1904.

Special attention has been paid, as in past years, to the publication, in Notices to Mariners, of all information obtained respecting hydrography, and a point has been made of including sailing directions in the description of aids to navigation. Hydrographic notes were issued as follows :

*Affecting the Atlantic coast:* Derelict reported in the North Atlantic ocean, by the officer of the Royal navy in charge at Bermuda ; bank reported S. E. of Sable island, by Mr. A. H. Davis, ss. *Lord Charlemont* ; warning to avoid the current survey steamer off Newfoundland ; position of fog signal and action of fog at Cape Spear described by Dr. W. Bell Dawson ; the arc of visibility of Swallowtail light corrected ; sailing directions for the new arrangement of range lights and gas buoys in Halifax harbour, and boats warned of danger zone at McNab island rifle range ; banks reported off Belle Isle by Capt. Tooker, R.N., and depth less than given in charts off the same island reported by Capt. Wallace, ss. *Montevidean*.

*Gulf of St. Lawrence.*—Hydrographic notes respecting Crapaud, by our local agent ; bridge located at Rexton, and approaches described by the undersigned.

*River St. Lawrence.*—Arc of visibility of the high light at Belle Isle corrected by Capt. Tooker, R. N.; new bridge at Quebec, as it affects navigation, and lights marking it, described from information obtained from the contractors ; sailing directions for the river from Platon to Cape Charles written from departmental records ; report of ss. *Dominion* touching at Cape Levrant ; shoaling of the ship channel at Champlain reported in June, and dredging reported completed here and at Pointe au Citrouille in July ; mariners warned not to mistake dredging marks in Lake St. Peter for buoys ; in June mariners were warned of temporary change in arrangement of aids to navigation to suit the operations of the dredge *Tarte* ; again in September, when the dredging reached lightship No. 1, and later in Ile aux Raisins traverse ; completed ship channel at Contrecoeur described from a report by Mr. F. W. Cowie ; also, the improved ship channel at Longue Pointe traverse.

*Inland waters.*—The lights, buoys and approaches at the lower end of the Soulanges canal, described from personal inspection by the undersigned ; two shoals formerly charted in the Thousand Islands proved not to exist, and an uncharted shoal located by Mr. S. J. Chapleau, P. W. D.; mariners asked to assist in maintenance of buoys at the foot of Wolfe island on complaint of Chief Engineer P. W. D.; the buoys maintained by the corporation of Toronto described, with hydrographic notes, from a report of the harbour-master ; mariners warned that the east breakwater at the east entrance was undermined ; Bronte harbour described, from an inspection by the undersigned ; sand bar reported at Port Credit by the director of the meteorological service ; lights and improvements to harbour of Meaford described by Mr. John Clark ; sailing directions and hydrographic notes issued for Collingwood from data by Mr. Hughes ; wharf in Providence bay described from inspection by the undersigned ; also a shoal ; wharf on the east side of Great Duck island, located by the undersigned ; uncharted shoal in Tenby bay located by Mr. Stewart ; private range lights at Silver islet described and sailing directions written by Mr. Stewart ; rocks in Pigeon bay located by Mr. Stewart.

*Pacific Coast.*—Notes respecting the range lights, at Portier pass from Capt. Walbran ; Cecil rock Queen Charlotte sound, located, off Redfern island, by Capt. H. Newcomb. Details, respecting several dangers furnished by Comm. Parry, R. N.

Rock reported off Sidney, by Capt. C. Hackett, and located by Capt. Walbran ; Patch reported off Nanoose by Comm. Parry, R. N.

Rocks located in Blunden harbour and sailing directions, by Comm. Parry, R. N. Uncharted rock reported off the Sisters by Capt. Walbran ; depth on Walbran rock, corrected by Capt. Walbran ; longitude of Esquimalt determined, anchorage-



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proclaimed rocks; reported in Colburne passage, by Comm. Simpson, R. N.; rock reported in Sidney channell by Comm. Simpson, R.N.; hydrographic notes on Oritlamme passage, from inspection by the undersigned; Khutze inlet described from survey by the undersigned; hydrographic notes on Howe sound, by Capt. Walbran; uncharted rock in Oyster harbour, reported by Capt. Walbran.

## TIDAL AND CURRENT SURVEY.

In this survey, an important advance has been made, by the purchase of the steamer *Gulnare* to enable the investigation of the currents to be resumed. The importance of further work of this character, was pointed out in my Annual Report for 1897, where observations of current were discontinued under the head of the Tidal Survey. The region requiring most immediate investigation, as there explained, was taken up to begin with; namely, the waters around the south-eastern coasts of Newfoundland, on the line of our most frequented steamship route. The currents in this region were examined last season, under the personal supervision of Dr. W. B. Dawson, the engineer in charge of the Survey. Special attention was given to the question of indraught into the larger bays on the south coast, and to the behaviour of the polar current which follows the eastern coast. For this work, the D. G. S. *Gulnare* was equipped with appliances for deep sea anchorage, and apparatus of a modern type, in some ways specially devised for the purpose. At anchorages carefully chosen, the speed of the currents was measured, and the direction noted every half hour, day and night. The observations also included the undercurrent, the density and temperature of the water, the mileage and direction of the wind, and a continuous record of the tide on a self-registering gauge placed in a harbour in the region, for comparison with the set of the current.

The behaviour of these currents is very varied, and they were found to be so weak as to be readily influenced by the wind; but by a systematic reduction of the results, Dr. Dawson has prepared a report which describes the currents as concisely as possible, while avoiding technicalities. The report is divided into two parts; the first deals with the currents met with on the steamship route, which follows the south coast for 180 miles. and the question of indraught into the larger bays; and the second part describes the character of the polar current on the east coast, and its possible change of direction when disturbed. The report is illustrated by nine diagrams and maps, which represent the results graphically. A Notice to Mariners will be issued, describing some of the leading features of the currents, for the immediate information of seamen.

In the tidal branch of the Survey, the principal tidal stations in Eastern Canada and Labrador have been continued in operation throughout the year without any serious interruption. At Father Point, the tide gauge was not installed in its new position; as the wharf, now being built there, was not sufficiently advanced. A specially devised system of piping was put in at St. Paul island, to decrease the wave motion, which is troublesome where the exposure is so severe, and a Notice to Mariners was issued giving tidal differences for additional localities. Also during the summer season, further observations were obtained at Charlottetown, Pictou and Souris, under the supervision of Mr. S. C. Hayden. Additional observations of the turn of the current in Northumberland Strait were also secured at Cape Traverse.

On the Pacific coast, the tidal observations have been continued at Sand Heads, Victoria, Bamfield in Barkley sound, and Port Simpson.

Tide tables for the year were prepared and issued in three sets as heretofore. This is convenient, because the regions they embrace are so distinct. In one set, our principal eastern harbours are included, with the Lower St. Lawrence, Bay of Fundy, and the Atlantic coast of Nova Scotia. Another set includes Charlottetown, Pictou, and Northumberland and Cabot straits. The third embraces the tide tables and tidal information for the Pacific coast. The extension of the observations there is gradually indicating the most rational subdivision of those waters into regions referable to the



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various tidal stations. All new results obtained from the observations are embodied in the tide tables.

Further reduction of tidal record from the principal stations, to improve the accuracy of the tide tables, is being made from year to year. For this, the height of the tide hour by hour, throughout the year is required; as well as a careful preparation of the record in other ways; and the progress made is but slow, for the want of sufficient assistance.

The tidal information for the Pacific coast meets with even more appreciation than the Atlantic tide tables. Besides the copies regularly distributed, 641 additional copies were sent out on request. Many applications are also received for information and reports; and 150 copies of the two latest reports on the tides of the St. Lawrence were sent to our leading steamship lines for distribution to their captains.

The appropriation for this Survey was increased last year to \$22,500 to cover the cost of the maintenance of the new steamer, as well as the maintenance of the tidal stations and salaries of observers.

The whole respectfully submitted,

WM. P. ANDERSON,  
*Chief Engineer.*

10th December, 1903.



DETAILED REPORT OF THE GENERAL SUPERINTENDENT OF LIGHT-  
HOUSES ON CONSTRUCTION AND MAINTENANCE OF LIGHT-  
HOUSES AND OTHER AIDS TO NAVIGATION UP  
TO NOVEMBER 30, 1903.

To the Deputy Minister  
of Marine and Fisheries.

SIR,—I have the honour to submit the usual annual report of work done in the construction and maintenance of aids to navigation for the year ended November 30, 1903.

Lighthouses, fog-alarms, buoys, beacons, and other aids to navigation throughout the Dominion of Canada are administered by the Department of Marine and Fisheries. The construction of new buildings and the more important repairs are under my direct supervision, the maintenance of existing stations is controlled by the several agents of the département, and the periodical inspection of the stations is made by inspectors resident in the different provinces, the agents in Prince Edward Island and British Columbia fulfilling the double duties. Much of the information contained herein is compiled from the annual reports of these officers.

The numbers and distribution of the several aids to navigation throughout the Dominion are shown in the following table :—

District.	Light-stations. Lights.	Keepers.	Fog-whistles and sirens.	Fog-horns.	Fog bells.	Fog-guns or bombs.	Whistling- buoys.	Bell-buoys.	Gas-buoys.
Province of Ontario . . . . .	210	282	197	4	11	4	1	6	32
Light ships . . . . .	3	3							
Province of Quebec . . . . .	148	209	167	5	8	1	8	1	33
Light ships . . . . .	7	7		3					(4 with bells).
Province of Nova Scotia . . . . .	197	214	204	11	6	2	1	22	22
Fog alarms . . . . .	3								3
Light ships . . . . .	1	1							
Province of New Brunswick . . . . .	103	133	103	4	8	2	1	5	6
Fog alarms . . . . .	4								
Light ships . . . . .	2	2				1			
Province of Prince Edward Island . . . . .	40	69	46		1			3	1
British Columbia . . . . .	36	43	34	1	6	6		1	
	754	963	751	28	40	16	10	31	68

\* Lightships and fog alarms where there are no lights are in this column included in the total number of light stations in the Dominion.

Supplies for the lighthouse services are purchased in bulk, under contract, except in the case of articles of which only small quantities are required, in which case they are purchased locally in the open market. These supplies are distributed from the stores at each district headquarters, usually under the personal supervision of the inspectors of lights, who inspect the stations when delivering the supplies. They also arrange for all small ordinary repairs and periodical painting of the buildings. These routine duties are not alluded to in describing the repairs executed at the several stations.



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Work of construction and extensive repairs are usually executed under contract ; minor repairs are done under the lightkeeper's supervision, or by foremen employed in the several districts.

Details of small repairs at established stations are herein omitted. Ordinary small repairs, such as are required for the proper upkeep of the stations, have been made, usually under the supervision of the keepers, on authority from the several provincial agents.

Estimates for any unusual repairs, or items involving considerable expense, have heretofore been submitted to the undersigned, and are authorized by the department from Ottawa before the work is undertaken. Full particulars respecting the cost of all repairs is contained in the Auditor General's report.

Lightkeepers and fog alarm engineers are expected to make any small repairs that can be reasonably expected of unskilled workmen, without charge, and are also called upon to do all painting required at the stations, being allowed some assistance when the buildings are so high as to require hanging scaffolds.

## ONTARIO LIGHTHOUSE DIVISION.

This division includes the lighthouses and other aids to navigation in that part of the province of Quebec lying west of Montreal, all those in the province of Ontario, and those on Lake Winnipeg, in the province of Manitoba. It is under the direct management of the headquarters staff at Ottawa.

The number of lighthouses, lighted beacons and lightships maintained by the Dominion in the Ontario division, as above described, is 283, located at 213 different stations.

The number of lightkeepers in this division paid directly by the government is 197 ; but in several cases assistants are employed by keepers and paid by them out of the allowance made by the government for that purpose.

There are in Ontario four fog whistles, eleven steam fog-horns and four fog-bells operated by machinery, all located at lightstations, as well as six bell-buoys and thirty two gas-buoys.

Besides the lights maintained by this department as above described there are in Ontario the following aids to navigation ; three lights on swing bridges ; a system of lights on the Murray canal, maintained by the Department of Railways and Canals ; five pairs of range lights on the Detroit and St. Clair rivers and one lightship with steam fog-alarm in Lake Erie, maintained by the American vessel owners principally interested ; eleven wharf lights maintained by the municipalities or corporations to which the wharfs belong ; two range lights maintained by local interest at Silver islet and one on Coppermine point.

Six of these last described stations are aided by this department to the extent of being furnished with the necessary oil for their maintenance.

A steamer is chartered yearly for the supply of the lightstations on the River St. Lawrence and the great lakes, between Montreal and the head of Lake Superior, and the lighthouses are supplied and the stations inspected on this trip, which occupies about seven weeks, by Mr. Patrick Harty, Superintendent of Lights. Mr. Harty also inspected the lights on the Ottawa river, but a few small lights on isolated waters, including Lake Timiskaming, Lake Nipissing, Lake Simcoe and the Bay of Quinte, were not inspected. Mr. John Nash, local agent of this department at Rat Portage, inspects the lights in Lake of the Woods from time to time, and generally attends to the interests of this department throughout Rainy river district.

## NEW AIDS TO NAVIGATION.

*Soulanges canal lower entrance.*—The eastern end of the south pier head, at the entrance, is marked by an occulting gas light shown from the summit of an open work pyramidal steel structure. The frame rises  $21\frac{1}{2}$  feet above the pier.



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The light is elevated 34 feet above the summer level of the lake and should be visible four miles from all points of approach. The illuminant is compressed gas. The light is white and shows a steady light for 8 seconds, and is totally occulted for 4 seconds alternately.

On the eastern extremity of the north pier head a fixed red light is shown from an iron lighthouse tower, circular in plan, surmounted by a circular metal lantern. The building is painted white, with the lantern roof red. The height of the tower from the top of its concrete foundation to the vane on the lantern, is  $29\frac{1}{2}$  feet. The light is elevated 37 feet above the summer level of the lake and should be visible 2 miles in the line of range. The illuminant is compressed gas. The illuminating apparatus is catoptric.

A similar light, shown from a similar tower, is maintained on the north bank of the canal, north of the second lock, and distant, 1,826 feet S.  $78^{\circ}$  12' W. from the last described light.

The tower is  $45\frac{1}{2}$  feet high and the fixed red light is elevated 59 feet above the summer level of the lake. The light should be visible 2 miles in the line of range.

These two fixed red lights, in one, lead into the canal from the most westerly of the three gas buoys indicating the north side of the channel between the point where the channel leaves the alignment of the Beauharnois range lights and the axis of the canal.

The lights were established by the canal authorities as part of the new canal equipment, and were transferred to the care of this department in moving order.

*Port Colborne.*—A lighthouse has been erected on the outer end of the new breakwater at the entrance to Port Colborne, and the light put in operation on the 17th October, 1903. This light replaces the temporary lights, shown from lens lanterns, referred to in last year's report which have been discontinued and the mast removed.

The tower is of concrete, square in plan, the sides of the lower portion being vertical and those of the upper portion sloping, and the whole painted white. It is surmounted by an octagonal iron lantern painted red. The tower is 46 feet high from its base to the top of the ventilator on the lantern.

The light is a fixed red light, elevated 50 feet above the level of the lake, and should be visible 8 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order. A stronger and more distinctive light will be substituted later.

A diaphone has been installed in the base of the lighthouse, which will be put in operation on the opening of navigation in 1904.

The tower was erected under contract by Messrs Hogan and MacDonell, contractors for the breakwater, and cost \$6,200.00; the fog alarm machinery, supplied by the Canadian Fog Signal Company cost \$2,400.

*Point Edward.*—Range light buildings have been erected at Point Edward, at the entrance of St. Clair river to guide from the lake into the river through the axis of the channel dredged by the United States government, and the lights were put in operation on September 1, 1903.

The towers are wooden structures, square in plan, with sloping sides, surmounted by square wooden lanterns, the whole painted white.

The front tower stands on the beach, 107 feet back from the water's edge.

The height of the tower from its base to the top of the ventilator on the lantern is 34 feet.

The light a fixed red light, elevated 35 feet above the level of the lake, should be visible 7 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The back tower stands on the same beach, 579 feet from the front tower. The height of the tower from its base to the top of the ventilator on the lantern is 54 feet.

The light is a fixed red light, elevated 58 feet above the level of the lake and should be visible 8 miles in the line of range. The illuminating apparatus is catoptric.

The buildings were erected by days' labour, under the supervision of Mr. W. K. Morris, of Ottawa, and cost \$2,119.86.



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*Kincardine.*—A steam fog siren, established in connection with the town waterworks machinery was put in operation on May 1, 1903.

During thick weather, throughout the season of navigation, the siren gives blasts of  $2\frac{1}{2}$  seconds' duration, with intervals of  $42\frac{1}{2}$  seconds between them, or one blast every 45 seconds.

The waterworks building is situated on the lake shore, north of the harbour entrance. It is a conspicuous building of white brick, with a high stack, the siren rises above the roof.

The machinery and installation cost \$293.08; the alarm is operated by the town at its own cost.

*Stoles bay.*—The back day beacon of the range established in 1899 to lead into this bay on the Saugeen peninsula, was blown down on May 27, 1903, but was not re-erected, as this department is proceeding with the erection of range lights on the sites of the two beacons.

The work is in charge of Mr. W. K. Morris as foreman, and will be completed next spring.

*Collingwood range lights and beacons.*—Temporary range lights, locally known as the 'shore range' have been established and are maintained by the corporation of Collingwood, in the south extremity of the harbour, which in one indicate the middle of the 20-foot channel from its outer extremity, outside the west breakwater pier, to the curve near the fixed red light on the crib in the harbour.

The front light of this range stands upon the shore in the south part of the harbour at a point 330 feet S.  $17^{\circ}$  W. from the northwest extremity of Fleming's wharf.

It consists of two fixed white lantern lights six feet apart vertically, hoisted on a pole painted white, having a diamond shaped white slatted beacon on top.

The back light pole stands on the south side of Second street, 130 feet west from its intersection with the west side of Cedar street, and is distant 1,610 feet S.  $10^{\circ}$  W. from the front light pole.

Two fixed white lights, shown from lanterns 6 feet apart vertically, hoisted on this pole, are shown. The pole is 55 feet high, and has on its top a diamond shaped slatwork beacon, 12 feet high by 8 feet wide, the whole painted white.

The middle of the 20-foot channel leading to the elevator is marked by two day beacons, the front one consisting of a diamond shaped slatwork, painted white, attached to a mast rising 32 feet above water level, on the outer or northwest end of the elevator wharf, the back beacon of a diamond shaped white mark, painted on the northwest end of the elevator, at a height of 40 feet above the water.

These two beacons in one, mark the middle of the 20-foot channel, 110 feet wide leading from the south end of the curve to the elevator.

*Bruce mines.*—A light was put in operation in July, 1902, on the new government wharf. It is shown from an anchor lens lantern on a shelf on the southeast corner of the unpainted warehouse, and 60 feet from the outer end of the wharf.

The light is a fixed white light, elevated 12 feet above the level of the lake, and should be visible 5 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The Bruce Copper Mines, limited, have notified the department of their intention to continue maintaining a red light on the southeast corner of the warehouse on the outer end of their private wharf, but this will be in no way under governmental control, or receive assistance, and will therefore be no longer considered an official light.

*Tolsmarville.*—A light was established on July 24, 1903, on the government wharf at Tolsmarville, on the north side of Cockburn island. It is shown from a pressed lens lantern, fixed on a stand 12 feet high, on the outer end of the wharf.

The light is a fixed white light, elevated 20 feet above the level of the lake, and should be visible 9 miles from all points of approach by water.



## NEW AIDS TO NAVIGATION.

*Lachine canal.*—The mast light maintained by this department on the upper end of the railway wharf at the upper entrance to the Lachine canal, was, in 1900, replaced by a permanent lighthouse forming the front light of a range established by the Department of Railways and Canals to indicate the axis of the dredged cut leading from the upper entrance of the canal into the 14 foot channel of the upper St. Lawrence system. These two lights were in 1902 transferred to the control of this department.

The front range lighthouse stands on an unpainted cribwork block, built on the west extremity of the railway wharf.

The tower is in the form of the frustum of a cone, in steel, surmounted by a cylindrical metal lantern. It is painted white; the roof of the lantern is of unpainted copper. The height of the building, from the deck of the block on which it stands to the top of the ventilator on the lantern is  $29\frac{1}{2}$  feet.

The light is an occulting white acetylene light, burning with full power for eight seconds, and with a dim light for two seconds, alternately, elevated 30 feet above the summer level of the lake. It should be visible 10 miles in, and over a small arc on each side of the line of range, and also in the channel in passing. The illuminating apparatus is catoptric.

The back light is distant 904 feet N.  $80^{\circ} 47'$  E., from the front one, and is a similar light. It is elevated 44 feet above the summer level of the lake, and should be visible 12 miles in, and over a small arc on each side of, the line of range.

The tower is similar to the front range light tower, but is higher. It stands on an unpainted cribwork block, in shoal water, in the bottom of the bay east of the railway wharf, and is connected with the shore by an elevated footpath. The height of the building, from the deck of the block to the top of the ventilator on the lantern, is  $48\frac{1}{2}$  feet.

The two lights in one, lead through the axis of the dredged cut, to the turning point  $1\frac{1}{2}$  miles distant.

*Oka.*—A pole light was, on September 16, 1903, established on the outer end of the wharf in front of the village of Oka, on the north side of the Lake of Two Mountains, Ottawa river.

The light is a fixed white light shown from a lens lantern hoisted on a pole fixed to the front of the freight shed on the wharf near its outer extremity. It is elevated 28 feet above the summer level of the river and should be visible 5 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The pole is 20 feet high and has a box at its base. It is attached to the southeast corner of the freight shed, which is a wooden building painted drab.

The work was done by Mr. Hyacinthe Lacroix, keeper of the lighthouse above Oka, at a cost of \$258.30, the lens lantern being provided from our stores.

*Narrow island.*—A new lighthouse has been built to replace the old lighthouse destroyed by fire on March 30, 1902. The light was put in operation on the opening of navigation in 1903, and the exhibition of the temporary light discontinued.

The lighthouse is erected on the site of the old lighthouse, on the western extremity of the island, and is a rectangular wooden building, with an octagonal wooden lantern standing on the west end of the roof, the whole painted white. The height of the building from its base to the vane on the lantern is 37 feet.

The light is a fixed white light, elevated 36 feet above the level of the lake, and should be visible 11 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

A red centre has been inserted in this light, which covers Foster bank and the shoals in its neighbourhood, and also indicates the direction of the shoals extending westward from the head of Narrow island.

The building was erected under contract by Mr. J. Candlish Kennedy, of Owen Sound. His contract price was \$2,576.40.

*Pointe aux Pins.*—On April 11, 1903, two temporary pole lights were established here, which on September 28, were replaced by inclosed range buildings.



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The towers are wooden buildings, square in plan, with sloping sides, surmounted by square, wooden lanterns, the whole painted white. The lights are fixed white catoptric lights.

The front tower stands on the north extremity of the sand spit running northward from the lighthouse on the south extremity of Pointe aux Pins.

The tower is 31 feet high from its base to the top of the ventilator on the lantern.

The light is elevated 28 feet above the level of the river, and should be visible 4 miles in the line of range.

The back tower stands on the west shore of the little bay formed by the sand spit, and is 920 feet S.  $54\frac{1}{2}^{\circ}$  W. from the front tower. It is 56 feet high from its base to the top of the ventilator on the lantern.

The light is elevated 53 feet above the level of the river, and should be visible 4 miles in the line of range.

This range takes the place of a private range, maintained by Mr. Rouleau, pilot, a short distance further north, which was ordered discontinued when our temporary lights were established.

*Otter island.*—A lighthouse has been erected on the northwest extremity of this island, off Otter head, northeast shore of Lake Superior.

The lighthouse is an octagonal wooden building, with sloping sides, painted white, surmounted by a polygonal iron lantern painted red. The height of the building from its base to the vane on the lantern is 36 feet.

The tower stands about 100 yards from the extreme north point of the island, on rock about 70 feet above the level of the lake. The lightkeeper's dwelling, a white wooden building, is on the south shore of Big Daves harbour, inside the north point of the island.

Pending the completion of the permanent illuminating apparatus for this lighthouse a temporary fixed white light was on October 23, 1903, exhibited from a seventh order dioptric lens placed in the lantern. The light is elevated 97 feet above the level of the lake, and should be visible 10 miles from all points of approach by water.

The buildings at this station were erected by contract by Mr. Wm. Fryer of Collingwood. His contract price for the work here and at Slate islands together was \$9,400.

The expenditure in this station to date exclusive of the contract price has been \$1,071.85.

*Peninsula harbour.*—A hand fog horn has been established at this light station, which will be used in answer to the fog signals of vessels whenever they are heard from the station.

*Slate islands.*—A lighthouse has been erected on the south extremity of the south Slate island, in the north part of Lake Superior.

It is an octagonal wooden building, with sloping sides, painted white, surmounted by a polygonal iron lantern painted red. The height of the building from its base to the vane on the lantern is 36 feet.

The tower stands on the summit of the hill which forms the south side of a harbour, now named Sunday harbour, at the south extremity of the group of islands. The light keeper's dwelling, a white wooden building, is on the beach of the harbour, northeast from the lighthouse.

Pending the completion of the permanent illuminating apparatus for this lighthouse, a temporary fixed white light, was on October 28, 1903, exhibited from a seventh order dioptric lens placed in the lantern.

The light is elevated 224 feet above the level of the lake, and should be visible 10 miles from all points of approach by water.

The buildings here were erected by Mr. Wm. Fryer of Collingwood, who took a contract for them and the Otter island work jointly as hereinbefore detailed; the expenditure outside the contract to date has been \$1,071.85.

*Silver islet.*—Two range lights, maintained by private parties since 1869 on the wharf on the Thunder cape shore of Lake Superior, inside Burnt island, abreast of



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Silver islet, and known as Silver islet range lights, are now assisted by this department, by being supplied with oil for illuminating purposes.

The lights are fixed white, shown from tubular lanterns supported upon posts painted white, and should be visible 2 miles in the line of range.

The front post is 12 feet high, and is situated on the wharf near its southwestern end. The light is elevated 10 feet above the water.

The back post stands on the wharf 116 feet N. 50° E. from the front one. It is 18 feet high and the light is 16 feet above the water.

The two lights in one bearing N. 50° E. lead to the wharf from the southwestward between the shoals off Burnt island and Catholic church point.

#### AIDS TO NAVIGATION DISCONTINUED.

*Presqu'île.*—The light in the back tower of the range which formerly led into Presqu'île bay, on the north shore of Lake Ontario, was discontinued when the ranges leading to the upper entrance of the Murray canal were established in 1891, but the tower was left standing because it was of use to small boats entering by the old shallow channel. In one with the lighthouse on Salt point it led through that channel. In consequence of decay it was found necessary this year to take down the old tower, and it is therefore no longer available as a day beacon.

*Pine Tree harbour.*—The range lights heretofore maintained by private enterprise on the northeast side of Pine Tree harbour, Saugeen peninsula, on the east side of Lake Huron, have not been in operation since the sawmill in the harbour was closed down.

#### CHANGES AND PRINCIPAL IMPROVEMENTS IN EXISTING AIDS.

*Baskins wharf.*—Towers have been erected at this Ottawa river station to replace the masts from which lights were previously exhibited. The masts have been removed and the lights were shown from the new towers on the opening of navigation in 1903.

The front tower stands 60 feet back from the water's edge, and is a wooden building, square in plan, with sloping sides, painted white. The height of the tower from base to vane is 26 feet. The light is elevated 30 feet above high water mark, and should be visible 6 miles in the line of range, and across the lake at right angles to the line of range. The illuminating apparatus is a pressed glass lens. The illuminant is acetylene.

The back range tower stands  $\frac{1}{3}$  mile S.E. from the front tower. It is a similar building. The height of the tower from base to vane is 31 feet. The light is elevated 50 feet above high water mark, and should be visible 6 miles in the line of range. The illuminating apparatus is catoptric. The illuminant is acetylene.

This work was done by day's labour under the superintendency of Mr. Madore, at a cost of \$1,154.43.

*Belleville.*—In consequence of the existence of a large number of bright lights in the vicinity of the lighthouse it was difficult to pick it out, and its colour was subsequently changed from white to red on September 15, 1903.

*Kincardine.*—The new lighthouse referred to in last year's report to replace the old front range lighthouse, destroyed by fire, was completed and the light was put in operation in May, 1903, when the exhibition of the temporary light was discontinued.

The lighthouse stands on the north pier, 230 feet from its west end, and 1,200 feet from the main lighthouse.

The lighthouse consists of a skeleton steel frame, square in plan, with sloping sides, painted brown, surmounted by a white, octagonal, wooden lantern. The tower is 33 feet high from its base to the vane on the lantern.

The light is a fixed red light, elevated 35 feet above the level of the lake, and should be visible 7 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.



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The steel work was supplied by the Gould, Shapley & Muir Co., Brantford, at a cost of \$442, and erected by Mr. John Watson, at a cost of \$598.52.

*Saugeen range.*—The maintenance of the back range light at the mouth of Saugeen river, established as a private light, has been assumed by this department, and the range has been improved by substituting for the lanterns on masts heretofore used enclosed lighthouse towers.

The towers are wooden buildings, square in plan, with sloping sides, surmounted by square, wooden lanterns, the whole painted white. Each tower is 31 feet high from its base to the top of the ventilator on the lantern.

The front tower stands on a cribwork block, built on the breakwater on the north side of the mouth of the river, and is distant 40 feet from the extremity of the breakwater.

The light shown from this building is fixed green (instead of the fixed white light shown from the mast). It is elevated 36 feet above the level of the lake, and should be visible 4 miles from all points of approach by water. The illuminating apparatus consist of a pressed glass lens.

The back tower stands on the point formerly occupied by the mast from which the back light was shown, on the hillside near the inner extremity of the breakwater, 700 feet inside the front light.

The light is a fixed green light, elevated 49 feet above the level of the lake, and should be visible 4 miles in and over a small arc on each side of the line of range.

The work was done under contract by Mr. John McAulay. His contract price was \$1,085.

*Point au Baril.*—The back range tower has been replaced by a new tower erected on the site of the old one, upon the summit of an island in the inner channel, 4,800 feet from the front range lighthouse.

The new building is square in plan, with sloping sides, and consists of a skeleton steel frame, surmounted by an inclosed wooden watch room and a square wooden lantern. The steel frame is painted red, and the woodwork white. The building is 51 feet high from the ground to the vane on the lantern.

The light shown from the new tower is a fixed red light, elevated 62 feet above the level of the bay, and should be visible 9 miles in, and over a small arc on each side of the line of range. The illuminating apparatus is catoptric.

The steel framework was furnished by the Gould, Shapley & Muir Co., of Brantford, at a cost of \$410.00, and was erected under contract by Mr. R. Hudson whose price was \$490.00.

*Little Current.*—Immediately after the opening of navigation in 1903, the light shown from the tower in the village was changed from fixed white to fixed red, so as to render it readily distinguishable from the village lights. At the same time the old catoptric apparatus was removed and replaced by a dioptric lens of the seventh order.

*Flowerpot island.*—The fog bell at this station referred to in the last year's report as disabled in August, 1902, was again put in operation in September.

*Cape Croker.*—The light has been changed from a fixed white to an occulting white light, visible for 23 seconds and eclipsed for  $4\frac{1}{2}$  seconds, alternately. In other respects the light is unchanged.

The electric fog horn has been replaced by a fog siren operated by compressed air, which, during thick or foggy weather, will give blasts of 15 seconds' duration, separated by silent intervals of 15 seconds.

*Meaford.*—The illuminant used in the lighthouse on the outer end of the breakwater on the west side of the entrance to the harbour, was on 1st May, 1903, changed from coal oil to electricity, and increased in intensity: and the maintenance of the pole light established by the corporation of the town on the east breakwater pier, as described in last year's report was assumed by this department, and the light was on 29th May, 1903, changed from an oil light to an incandescent electric light. It shows a fixed



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bright light from a 32-candle power lamp placed in a lantern hoisted on a pole at an elevation of 14 feet above the level of the water, and standing two feet from the extremity of the east breakwater.

In the event of the failure of either of these electric lights, an oil light will temporarily replace it.

*Sault Ste. Marie*.—On the opening of navigation in 1903, the range lights marking the approach from the westward to the Canadian canal were improved by substituting for the illuminating apparatus hitherto used in each lighthouse a group of three incandescent electric lamps, each of 65-candle power, placed in the foci of paraboloidal reflectors.

Both lights were also changed in colour from fixed white to fixed red.

These lights should show very strong beams in and over a small arc on each side of the line range.

The lights herein referred to are those shown from the lantern on the cribwork beacon at the turn in the channel, and from the tower on Davignon point.

At the same time the electric arc light, maintained by the Department of Railways and Canals on the upper end of the north pier of the Canadian canal and the similar light on the upper end of the south pier, were changed in colour from red to green, so as to distinguish them from the red range described above.

The two lights changed in colour are respectively the most westwardly light of each of the two rows of arc lights illuminating the canal bank and cribwork approaches.

These changes were made under the supervision of Mr. J. C. Boyd, superintendent of the canal, who in the interests of shipping has been very kind in rendering gratuitous assistance to this department on all possible occasions.

#### BUOYS AND BEACONS.

*Windmill point*.—On June 6, 1903, the steamer *Keefe* of the Wolvin line drawing 14 feet water, touched in the main channel of Lake St. Louis, at a spot 200 feet south of gas buoy No. 98 S. which marks the north side of the channel east of Windmill point, Ile Perrot. This gas buoy was consequently moved to a new position about 300 feet south of its former location.

*Macnair shoal*.—On September 23, 1903, a spar buoy, painted in red and black horizontal bands, was established in 15 feet water near the centre of Macnair shoal, a rocky ledge about 800 feet from Macnair island, below Brockville, replacing a spar buoy theretofore maintained in the same locality by the United States Government.

*Hillcrest shoal*.—On September 23, 1903, a gas buoy was established on the south-east edge of the shoal in the St. Lawrence river, about 250 feet from the north shore, opposite Hillcrest, and near the upper end of the narrows at the Brock group of islands, replacing a gas buoy theretofore maintained by the United States Government in the same locality.

The buoy is of steel, cylindrical, surmounted by a conical slatwork, on which stands the usual Pintsch type of lantern, the whole painted red. The light is a fixed white acetylene light. It is elevated 9 feet above the level of the river, and should be visible 4 miles.

*Toronto*.—The bell buoy heretofore maintained by the corporation to reach the crib at the outer end of the waterworks intake pipe has been discontinued. A notice to mariners was issued in August, 1903, describing all the buoys maintained by the corporation of Toronto in the approaches to the harbour.

*Surprise shoal*.—On the opening of navigation in 1903, the bell buoy was changed in colour from red to black, as it is on the south-west side of the shoal, and the usual course of steamers is between it and the shore.

*Lone rock*.—The bell buoy marking this rock, which was sunk on its station has been replaced by a new one on the opening of navigation in 1903.



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*Jennie Graham shoal.*—The platform buoy marking this shoal, south of the Duck islands, Lake Huron, has been replaced by a bell buoy of United States Government pattern, moored in June, 1903, south of the shoal, in 7 fathoms.

The buoy is of steel, painted red, and is surmounted by a bell rung by the motion of the buoy on the waves.

*Hare island shoal.*—On August 26, 1903, a redspar buoy, showing 6 feet out of water was placed by Mr. Stewart, hydrographic surveyor, to mark the south end of the dangerously shoal spit running out for Hare island, Thunder bay.

*Fort William.*—On August 25, 1903, a wooden platform buoy, 12 feet square, surmounted by an octagonal wooden pyramid 8 feet high, with vertical slatwork, the whole painted red, was established at the outer end of the northern edge of the dredged channel into Fort William, at the mouth of the Kaministiquia river.

The superstructure of this buoy is capped by a Wigham 31-day lamp painted white, which, from a height of 9 feet above the water, exhibits a fixed white light, that should be visible 5 miles from all points of approach.

The buoy is moored in 23 feet water, replacing the outer red spar buoy, which marked the edge of the dredged channel.

*Victoria island channel.*—On the 2nd September, 1903, Mr. W. J. Stewart, hydrographic surveyor, established three spar buoys off the western end of Victoria island Lake Superior, as follows :—

1. A spar buoy painted in red and black horizontal bands, showing 12 feet out of water, 3,200 feet from the most westerly point of Victoria island, and 2,000 feet from the nearest rock of Tiger island.

The buoy is on the middle of a small rock with 6 feet least water upon it, the shoalest part lying northeast 100 feet from it. Southeast 100 feet from the buoy is the outer end with only 14 feet of water over it.

2. A black spar buoy, showing 10 feet out of water, close off the spit from the most westerly end of Victoria island in 5 fathoms.

3. A red spar buoy, showing 10 feet out of water, 4125 feet from Victoria island lighthouse, and 1600 feet off the nearest, low, grassy point.

## QUEBEC LIGHTHOUSE DIVISION.

This district extends from the entrance of the Strait of Belle Isle to Montreal, a distance of over 1,200 miles, and includes aids to navigation in the Richelieu river and Lake Memphremagog, as well as in the River St. Lawrence, Saguenay river, Lake St. John, Chaleur bay, Gulf of St. Lawrence, Strait of Belle Isle, north and west coasts of Newfoundland and Labrador.

This division is under the control of Mr. J. U. Gregory, I.S.O., agent of the Department of Marine and Fisheries, at Quebec, who is also shipping master, attends to the requirements of the British Board of Trade in matters of shipwrecked and distressed seamen and casualties at sea, is receiver of wrecks, supervisor of wharfs, a fisheries officer for the province of Quebec, and superintendent of the signal service.

The agent's staff consists of Mr. L. A. Blanchet, chief clerk and accountant, and deputy shipping master : Mr. George D. O'Farrell, lighthouse inspector ; Mr. Alphonse Hamel, clerk ; and Mr. P. J. O'Brien, storekeeper and wharfinger, with assistants as required.

The workshops with a large stock of models of various kinds needed for the service are under Mr. Ernest Roy, Mr. François Turgeon and Mr. Louis Gagné, master carpenters, and Mr. Narcisse Dufour, master-shipsmith. The gas works are under Mr. G. Bélanger.

The steamers at the disposal of this agency during the past year were the New Dominion steamer *Druid*, Captain C. Koenig, in charge of lights, and buoys and beacons from Platon to Father point and the steamer *Aberdeen*, Captain Bélanger, which



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supplied the lights in the river and Gulf of St. Lawrence, Strait of Belle Isle, Anticosti, Magdalen islands and Chaleur bay.

The lights above Quebec were supplied by passenger steamer or by rail as proved most economical and convenient.

The buoys between Platon and Montreal are under the supervision of Mr. U. P. Boucher, as engineer, who has the steamer *Shamrock* allotted to him for this service.

There have been put in operation, between Quebec and Montreal, 12 new lights since my last annual report, which now brings the total number of aids to navigation in this division to 200 lights at 121 stations, 6 lightships, 3 of which are supplied with powerful steam fog whistles, one powerful first order siren blown by compressed air, 9 explosive bomb signal stations in connection with lights, 2 steam fog whistles and 9 steam fog horns; 12 gas buoys, 4 of which are supplied with bells, 170 wooden and iron buoys and 59 beacons.

#### NEW AIDS TO NAVIGATION.

*New Carlisle.*—A light, shown from a lantern hoisted on a mast, was established on 1st August, 1903, on the Government wharf.

The light is fixed red, shown from a square tubular lantern, elevated 32 feet above high water mark, and visible 2 miles in the approach to the wharf.

The mast is 25 feet high, above the deck of the wharf. It stands against the south side of the freight shed at the outer end of the wharf.

*Barachois de Malbaie.*—A pole light was established on the north side of the entrance in May, 1903.

The light is fixed red shown from a lantern with a small reflector behind it, hoisted on a pole. It is elevated 70 feet above high water mark, and visible 4 miles from all points seaward.

The pole is white and is 38 feet high. It has a wooden shed, white with red roof, at its base, and stands on the point opposite the sand beach known as the Barachois.

The total expenditure in connection with the establishment of this aid has been \$128.29.

*Seven islands.*—An explosive fog alarm was established at the light station on Caroussel island, on 15th August, 1903, for the protection of vessels trading along the north shore. It consists of cotton powder bombs, exploded every 10 minutes from a jib 300 feet southeast of the lighthouse.

*Rivière à la Pipe.*—In the summer of 1901 the agent of this department at Quebec completed arrangements for the establishment of a light, on the government wharf at this point on Lake St. John. It is shown from a pressed glass lantern hoisted on a pole on the southwest corner of the wharf, which is built on lot 18 in the first range of Taillon,  $\frac{3}{4}$  mile west of the mouth of the river.

*Ile au Béliér.*—A similar light was at the same time established on Ile au Béliér, east of Ile Verte,  $\frac{1}{2}$  mile northwest from St. Gédéon, is shown from a pole on the southwestern part of the island. The pole is 16 feet high with a small shed at its base.

*Pointe Noire.*—The range lights formerly maintained at the entrance to the Saguenay were re-established on the 15th August, 1903.

They are fixed white catoptric, shown from square wooden towers, with sloping sides, surmounted by hexagonal wooden lanterns, the whole painted white. Each tower is 27 feet high from its base to the top of the ventilator on the lantern.

The front tower stands on the point, near its east extremity.

The light is elevated 60 feet above high water mark, and visible 13 miles in the line of range.

The back range tower stands 1558 feet N. 60° 15' W. from the front tower. The light is elevated 131 feet above high water mark, and visible 15 miles in the line of range.



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The two lights in one, bearing N.  $60^{\circ} 15'$  W., lead into the mouth of the Saguenay, clear of Prince shoal, Bar reef and Vache shoal.

The work of refitting the old towers was done by men sent from the shops of our Quebec agency.

*St. Ours traverse.*—Two range light towers were erected and put in operation on the 27th October, 1903. They show fixed white catoptric lights, visible only in the line of range. They mark the tangent previously marked by day beacons, but 75 feet westward of and parallel to them.

The front tower is a square wooden building, with sloping sides, painted white, surmounted by a square wooden lantern painted white with a red roof. It is 33 feet high from the pier to the ventilator on the lantern.

It stands upon a whitewashed concrete pier 22 feet high, built on the beach, 2580 N.  $13^{\circ} 52'$  E. from the front day beacon, lately removed.

The light is elevated 50 feet above the summer level of the river, and visible 4 miles.

The back light is elevated 87 feet above the water, and visible 4 miles.

It is shown temporarily from a lantern hoisted on a mast rising 15 feet above the steelwork of a skeleton tower. This tower when completed will consist of an open steel framework, square in plan, with sloping sides, painted brown, surmounted by an enclosed wooden watchroom, capped by a square wooden lantern. The side of the framework facing the channel is rendered more conspicuous as a day beacon by being covered half way down with wooden slatwork. The lantern roof will be painted red, the remainder of the lantern, the watchroom, and the slats, will be white. The height of the tower from its base to the ventilator on the lantern will be 64 feet.

The tower stands 2,700 feet S.  $15^{\circ} 30'$  W. from the front light, and 125 feet S.  $54^{\circ} 4'$  W. from the front beacon, lately removed.

The two lights in one, bearing S.  $15^{\circ} 30'$  W., mark the axis of the improved ship channel from gas buoy 5 M. to Bellmouth curve.

*Petite Traverse.*—Two range lights were on the 27th October, 1903, established to mark the axis of the straight cut known as Petite Traverse in the improved ship channel.

The lights and towers are similar in every respect to those last described, marking the St. Ours traverse.

The front tower stands on the ground on the crest of the river bank east of St. Ours traverse, 185 feet from the position occupied by the day beacon which it replaces, and 6735 feet N.  $27^{\circ} 24'$  E. from St. Ours traverse front range lighthouse.

The light is elevated 62 feet above the level of the river.

The back tower stands in the fields 205 feet N. from the day beacon which it replaces, and 1830 feet N.  $61^{\circ}$  E. from the front tower. The light is elevated 117 feet above the level of the river.

The two lights in one astern lead through Petite Traverse in the axis of the ship channel, from Bellmouth curve to Contrecoeur bend.

*Contrecoeur course.*—Two range lights, exactly similar to those last described, were established on the 27th October, 1903, to mark the axis of the cut in the improved ship channel known as Contrecoeur course.

The front tower stands on the ground on the crest of the river bank east of St. Ours traverse, 155 feet from the position occupied by the day beacon which it replaces, and 4275 feet N.  $8^{\circ} 48'$  E. from the front tower of the Petite Traverse range.

The light is elevated 63 feet above the level of the river.

The back tower stands in the fields, 75 feet S.  $40^{\circ} 30'$  E. from the position previously occupied by the day beacon which it replaces, and 2555 feet N.  $48^{\circ} 15'$  E. from the front tower.

The light is elevated 127 feet above the level of the river.

The two lights in one astern lead through Contrecoeur course in the axis of the ship channel S.  $48^{\circ} 15'$  W. from Contrecoeur bend to the bend at gas buoy No. 43 M.



*Contrecoeur to Verchères range.*—Two range light towers, with the above designation, were erected last year and completed this season in the prolongation of the axis of the new dredged channel eastward between Verchères Traverse and Contrecoeur Traverse. The western end of the same axis is marked by the Verchères village range lights.

Lights were shown from these buildings on 27th October, 1903.

The lights are fixed white catoptric lights, visible 6 miles in the line of range.

The front tower is a square wooden building, with vertical sides, standing on a concrete pier. The pier is whitewashed, and the lighthouse is painted white with a red roof. It stands in one foot water on the flats making out from Contrecoeur, on the south shore of the river. It is distant 4350 feet N. 42° W. from Contrecoeur village church.

The back light is shown temporarily from a lantern hoisted on a pole above the steel framework of the tower, which is a square building, with sloping sides, consisting of an open, steel framework, with wooden slats on the upper portion of the side facing the alignment. The skeleton steelwork is painted brown, and the slats are white. The height of the tower from the pier to the top of the slatwork is 42 feet. When the wooden superstructure of this tower is completed the light will be shown from the lantern thereof without any change in its height or character.

The pier on which the tower stands is of concrete, whitewashed.

The deck of the pier is 26 feet above the summer level of the river. This pier stands upon an islet rising out of the same flat on which the front one stands. It is distant 9,250 feet N. 54° 30' E. from the front tower.

These buildings, with their concrete foundations, were erected by day's labour, under the supervision of Mr. E. Roy, foreman of works, and together with the three new ranges at Contrecoeur, have cost to date \$26,631.84.

*Ile aux Raisins.*—The back tower of the range was in July, 1903, replaced by a new lighthouse, consisting of a skeleton steel frame, square in plan, with sloping sides, surmounted by an enclosed wooden watch room and an octagonal wooden lantern. The steel frame is painted brown and the woodwork white. The building is 85 feet high from the ground to the vane on the lantern. It stands on concrete piers, built on piles.

The light is, as heretofore, fixed white catoptric. It is elevated 86 feet above the level of the river, and should be visible 7 miles in the line of range. It may also be seen dimly from other parts of the channel.

The lighthouse is built immediately in rear of the old one; the distance between the two range lights is 2,020 feet, and the bearing of the range is S. 25° W. The old tower and the pier on which it stood are being removed.

The work was done under the supervision of Mr. E. Roy, foreman of works, and cost \$3,941.75.

*Pointe aux Trembles, en haut.*—On the opening of navigation this year the range lights, which had originally been erected by the Montreal Trinity House, but which no longer marked the axis of the improved ship channel, were permanently discontinued, having been replaced by Ile aux Vaches traverse range lights, herein described. The back range tower was taken down and re-erected in Varennes village; the front range tower, a very old building almost obscured by trees and buildings, was sold with the land formerly occupied by the range. The change was made under the supervision of Mr. E. Roy.

*North of Halfway point.*—The front lighthouse of this range was overturned by ice in the spring of 1902.

Until repairs could be made a temporary light shown from a lantern hoisted on a pole was exhibited.

On July 28, 1902, the light was again shown from the front range tower.

In making repairs the range was improved by placing the tower on a new cribwork pier, built on the edge of the river, 345 feet in front of the old site, so that the front tower now stands S. 17° W. 1,158 feet from the back range tower. The tower was also



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decreased in height so that it is now only 13 feet high. The light is elevated 15 feet above high water mark and should be visible 8 miles in the line of range.

These changes were made under contract by Mr. A. Boivin, and cost \$710.91.

*Ile Bouchard range.*—On June 18, 1903, lights were shown from the range light towers erected in 1902 on Ile Marie and Ile Bouchard, described in last year's report. These lights will be permanently maintained.

Both lights are fixed white catoptric lights, visible 8 miles in, and over a small arc on each side of, the line of range. The front light is 39 feet and the back light 75 feet above the level of the river.

The two lights in one, bearing N.  $51^{\circ} 15'$  E., indicate the axis of the ship channel from Cap St. Michel to the head of Verchères traverse.

*Varennnes.*—The back range lighthouse removed from Pointe aux Trembles was erected last winter in the village of Varennnes, and put in operation on the opening of navigation in 1903.

It stands on the outer edge of the main road in the village, 265 feet from the village church.

The lighthouse consists of a square skeleton steel frame, painted red standing on a concrete abutment, with sloping sides, an enclosed wooden watch room and a square wooden lantern painted white. The side of the framing facing the channel is rendered more conspicuous by a wooden slatwork extending below the watch room. The building is 61 feet high from the ground to the vane on the lantern.

The light is a fixed white catoptric light, elevated 80 feet above the summer level of the river, visible 4 miles in the line of range.

This light in one with the front range light on Ile à l'Aigle, bearing N.  $46^{\circ}$  E., forms a range known as Ile aux Vaches traverse range, which indicates the axis of the dredged ship channel from the point where it leaves the alignment of Ile Ste. Thérèse upper range lights to the bend below Ile aux Vaches light.

The work of removal was done under the supervision of Mr. E. Roy, foreman of works, at a cost of \$2,637.40.

*Boucherville range.*—Range lights were put in operation on September 1, 1903, on the north end of Ile St. Joseph or Grosbois, to guide through the south channel, used by market boats, leading from Varennnes into Boucherville channel.

The lights are fixed white lights shown from pressed lens lanterns, hoisted on masts. The masts have diamond-shaped targets attached to them, to serve as day marks,  $4\frac{1}{2}$  feet square, painted black.

The front light is 480 feet back from the water's edge in the line of range, on the north end of the island and is elevated 18 feet above the summer level of the river and visible 4 miles.

The back light is situated 760 feet S.  $23^{\circ} 12'$  W., from the front light.

It is elevated 29 feet above the summer level of the river, and visible 4 miles.

The lights are intended to guide through the south channel leading from Varennnes into Boucherville channel.

The work of erection was done under the supervision of Mr. U. P. Boucher, engineer in charge.

*Bellerive park range.*—Two range lights established by the harbour commissioners of Montreal, were put in operation on November 9, 1903, to mark the middle of the ship channel from the turn of Longueuil gas buoy No. 181 M to the turn below Ile Ronde gas buoy, No. 195 M.

The lights are fixed red electric arc lights elevated on poles and visible two miles in the line of range.

The front line pole stands in Bellerive park on section 32 of the wharf, forming the west shore of the River St. Lawrence, near its edge. The light is elevated 55 feet above low water.

The back light pole stands on the high ground S.  $50^{\circ}$  W. 580 feet from the front one. The light is elevated 75 feet above low water.



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*Hochelaga range.*—Two range lights established by the harbour commissioners of Montreal, were put in operation on November 9, 1903, to mark the middle of the ship channel from the turn at Ile Ronde gas buoy No. 195 M. up into the harbour of Montreal.

The lights are fixed red electric arc lights, attached to day beacons which have marked this alignment since 1888.

The front beacon stands on section 41 of the wharf forming the west shore of the river at Hochelaga. The light is elevated 38 feet above low water.

The back beacon stands on the high ground behind section 43, N. 25° 45' E. 1,010 feet from the front one. The light is elevated 51 feet above low water.

*Longue pointe.*—Two range lights were established on October 28, 1903, 1½ miles below Longue pointe church.

The lights are fixed white with seventh order lens lanterns hoisted on poles and visible 4 miles from all points of approach by water.

The front light is shown from a mast 6 feet high, 8,825 N. 5° 42' E. from Longue point church. It is elevated 30 feet above extreme low water mark.

The mast of the back light is 29 feet high, and the light is elevated 55 feet above the water. It stands 818 feet due north from the front one and is on the south side of the main road along the shore.

The lights in one, astern, lead through Longue point traverse, on a due south course, from the upper end of the curve at the head of Pointe aux Trembles channel to the turn above Longue point village. It is intended during the present winter to replace the masts by lighthouse towers.

#### CHANGES AND IMPROVEMENTS IN EXISTING AIDS.

*Bird rocks.*—On October 1, 1903, the light shown which has heretofore been fixed white, was advertized to be changed to occulting white; the light showing for 15 seconds and being eclipsed for 5 seconds alternately, and the illuminant to be petroleum vapour burned with an incandescent mantle of power greatly superior to that of the old light. The keeper appears to have had difficulty with the vapour burners and the occulting mechanism, as the light was reported as showing fixed as before during the late autumn.

*Amour point.*—On September 15, 1903, the light which had theretofore been fixed white, was changed to occulting white; the light showing for 16 seconds and being eclipsed for 4 seconds alternately. The illuminating apparatus is dioptric of the second order, and the new illuminant is petroleum vapour burned with an incandescent mantle.

The keeper here has also had trouble with the incandescent burners.

*Cape Rosier.*—On May 23, 1903, the light was changed from fixed to occulting, showing for 15 seconds and eclipsed for 5 seconds, alternately.

The illuminant is petroleum vapour, burned with incandescent mantles, and the new light is much whiter and more powerful than the old one.

*Fame point.*—On July 1, 1903, the lighthouse tower at this station was changed in colour from white with a black horizontal band as at present to bright red. The lantern roof, gallery and walls of the tower are all painted the same bright red colour.

This change was made as an experiment to ascertain whether the building against the green back ground in the summer time and against the snow in spring and autumn would be more conspicuous than it was when white.

Reports received from mariners have been to the effect that its visibility was increased by the change.

*Father point.*—On the opening of navigation in the spring of 1903 the explosive fog signal heretofore operated at Father point lightstation was discontinued, and replaced by a first class siren, operated by compressed air, giving a high and a low note each of 2½ seconds duration, with an interval of 2½ seconds between them, at intervals of two minutes.



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The fog alarm building is a white, wooden, rectangular building, with a shingled roof, and stands on the beach 432 feet N. 80° E. from the lighthouse. The siren projects from an annex on the north side of the building; its axis is 17 feet above high water mark.

In the event of the siren being out of order, the use of the explosive fog signal will be temporarily resumed.

*Bellechasse.*—On the opening of navigation in 1903 the light which was theretofore fixed white catoptric, was changed to occulting white: the light showing for  $5\frac{1}{2}$  seconds and being eclipsed for 3 seconds alternately. The new illuminating apparatus is dioptric of the fourth order, and the illuminant petroleum vapour burned with an incandescent mantle.

*St. Laurent.*—In 1902 the government wharf here was lengthened 70 feet, and on the opening of navigation in 1903 the light theretofore shown from a lighthouse on the wharf was removed to a lantern on the roof of the freight shed, which has been removed to the new extension. The light is now shown from a point 75 feet outside its old position and 55 feet inside the extremity of the wharf. The old lighthouse has been taken down.

The light is elevated 33 feet above high water mark, and is, as heretofore, a fixed white light, visible 11 miles from all points of approach by water.

The freight shed is a rectangular wooden building and stands over the slip in the middle of the end of the wharf. It is painted pink, with moss green roof. The octagonal metal lantern is painted white, with green roof. The height, from the deck of the pier to the ventilator on the lantern is 38 feet.

*Ste. Petronille.*—In May, 1903, the colour of the lighthouse was changed from green to white, with a red lantern roof.

*Barre à Boulard.*—The range lights, heretofore fixed red, were on July 1, 1903, made fixed white and greatly increased in intensity, so as to have a range of 11 miles; they indicate the axis of the ship channel from its intersection with the Lotbinière range alignment to Batture Simon.

(b.) The back light of Barre à Boulard range is now shown from a new tower erected over the old back range light shed, which, with the day beacon surmounting it, have been taken down.

The new structure consists of a skeleton steel frame, square in plan, with sloping sides, surmounted by an enclosed wooden watch room and a square wooden lantern. The side of the framing facing the channel is rendered more conspicuous by wooden slatwork extending below the watch room. The steel frame is painted red and the woodwork white. The building is 61 feet high from the ground to the vane on the lantern.

The light is elevated 160 feet above high water mark, and should be visible 11 miles in, and over a small arc on each side of, the line of range.

*Platon.*—On July 1, 1903, the fixed white lights in the high land and the light on Richelieu islet were discontinued, as the portion of the ship channel covered by them is better indicated by the improved Barre à Boulard range; but at the solicitation of the pilots these three lights were relit on October 22, though at the same time mariners were warned that they do not correctly mark the improved ship channel, and were advised not to be guided by them.

*Lake St. John.*—Eight spar buoys were in 1901 established for the benefit of the ferry steamer running between the government wharfs at St. Jérôme, St. Gédéon, and Rivière à la Pipe. No particulars respecting these positions have been received. They are maintained by Mr. Alex. Morin at an annual cost of \$40.

In 1903 arrangements were made with Lt. Col. B. A. Scott, whereby small spar buoys are maintained in the entrances to the principal rivers falling into lake St. John to guide through their navigable channels, as follows: In the Assonapmouchouan, 68



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buoys : in the Mistassini, 120 ; in the Peribonka, 24 ; and near Roberval, 3 buoys. An allowance of \$250 per annum is made for this service.

*Chicoutimi anchorage.*—Two buoys were, on the 10th August, 1903, established in the Saguenay river below Point Roches to indicate the best anchorage for deep draught vessels waiting for cargo from Chicoutimi ; one, an iron can buoy painted in black and white chequers, moored in 5 fathoms on the east edge of the flats, with Cape West just open of High Rocky point.

The other a red spar moored in 43 feet a short half cable from a rocky spit carrying 7 feet water and shoaling to 2 feet inshore.

*Rimouski road.*—A gas buoy was, on the 25th June, 1903, established to mark the point where the mail steamers should meet the tenders carrying the mails to and from Rimouski wharf.

It is a steel cylindrical buoy surmounted by a conical slatwork, the whole painted black, on which stands the usual Pintsch type of lantern. The light is a white light, visible for 7 seconds and occulted for 6 seconds alternately.

The buoy is moored in 7 fathoms water,  $1\frac{1}{2}$  miles N.  $24^{\circ}$  E. from the outer end of Rimouski wharf, and 2 miles N.  $85^{\circ}$  W. from Father Point lighthouse.

*Ship channel below Quebec.*—The colouring of the following buoys was changed in July, 1903, to bring them into conformity with the uniform system of buoyage adopted in Canada ; Alcide rock can, from black and white chequers to black ; Barrett ledges can, from black and white chequers to red and black bands ; Channel patch gas, from black and white chequers to red and black bands ; Grosse Ile patch can from black and white chequers to black ; Grosse Ile rock, from a black and white chequered can to a red conical buoy ; and West Sand spit, from black and white chequers to black.

*Lower Traverse.*—On the 22nd May, 1903, the red, conical, steel buoy marking the south edge of the South Traverse middle ground was replaced by a steel, cylindrical gas buoy, painted red, surmounted by a conical slatwork, on which stands the usual Pintsch type of lantern. The light is a white light, occulted at short intervals. This buoy is nearly opposite the new Lower Traverse lighthouse pier.

*Batture Simon.*—A gas buoy, showing an occulting white light, was on the 17th June, 1903, moored in place of the red conical buoy No. 68Q, marking the south extremity of Batture Simon.

The buoy is of steel, cylindrical, painted red, with 68Q in white on the sides, surmounted by a conical slatwork topmark, on which stands the usual Pintsch type of lantern. The light is elevated 9 feet above the level of the water and should be visible 4 miles.

*Yamachiche bend.*—On the 22nd June, 1903, Buoy No. 57 L, the can buoy painted in white and black horizontal bands, moored in Lake St. Peter at the bend between lightships No. 1 and 2, and known as "La bouée caille," was replaced by a steel, cylindrical gas buoy, painted black, surmounted by the usual Pintsch type of lantern. The light is an occulting white light, visible for 10 seconds and obscured for 10 seconds, alternately.

*Contrecoeur channel.*—In connection with the improvement and widening of the 30-foot ship channel between Lanoraie and Ile Bouchard, known as Contrecoeur channel, the buoys maintained by this Department required re-arrangement to suit the improvements, and to equip the channel for night navigation. During the month of October, 1903, all the buoys in this stretch were re-arranged to suit the improvements : three spar buoys being discontinued, and four unlighted buoys replaced by gas buoys. A notice to mariners fully describing these changes was issued.



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*Ile Bouchard to Varennes.*—In connection with the straightening and widening of the 30 foot ship channel between Contrecoeur and Varennes, the buoys maintained by this department required re-arrangement to suit the improvements. Most of this work was done on the opening of navigation in 1902, but particulars of the changes made only reached my office in June, 1903. They were immediately embodied in a notice to mariners.

*Longue pointe.*—On June 21, 1903, red spar buoy No. 174 M, moored off Longue pointe, was replaced by a steel cylindrical Pintsch gas buoy, painted red, from which an occulting white acetylene light, visible for ten seconds and obscured for ten seconds alternately, is shown.

*Longueuil.*—On June 21, 1903, black can buoy No. 181 M, moored off Longueuil, was replaced by a steel cylindrical Pintsch gas buoy, painted black, from which an occulting white acetylene light, visible for ten seconds and obscured for ten seconds alternately, is shown.

## NOVA SCOTIA LIGHTHOUSE DIVISION.

This division, in charge of Mr. J. Parsons, agent of the department in this province, comprises 215 lighthouses, exhibiting 225 lights, 1 light vessel, 18 steam fog alarms, 1 explosive fog alarm station, 32 hand fog-horn stations, 2 fog-bells, 23 automatic whistling buoys, 21 automatic bell-buoys, 3 gas buoys, 145 iron or steel buoys, about 82 spar and other small buoys, 10 day beacons, 17 life saving stations, 5 marine hospitals, 2 humane establishments, and 8 signal stations. The steamers *Aberdeen* during winter, and the *Lansdowne* and the *Lady Laurier* during spring and summer, were utilized as lighthouse and buoy tenders.

The stations have been inspected by Mr. C. A. Hutchins, superintendent of lights, the boilers and machinery at the fog-alarm stations have been examined by Mr. D. Stevens, inspector of government steamboats and by the first engineer of the government steamers during Mr. Stevens' absences: and the life saving stations and apparatus have mainly been visited and cared for by Capt. Bloomfield Douglas, R.N.R., Naval Assistant. The coast buoys have been placed and changed by the government ships under direction of Supt. Hutchins.

The hundreds of harbour buoys are mostly under contract with reliable local men. The wharfs have been inspected by the agent personally.

## NEW AIDS TO NAVIGATION.

*Pennant harbour.*—A lighthouse was put in operation on July 7, 1903, on the north side of the entrance to Pennant cove, in the county of Halifax, for the benefit of the local fishermen.

The building is a square wooden tower with sloping sides surmounted by a square wooden lantern, the whole painted white. It is 33 feet high from its base to the top of the elevator on the lantern. It stands 10 feet above and 30 feet back from high water mark.

The light is a fixed white catoptric light, elevated 37 feet above high water mark, and should be visible 7 miles from seaward. It shows only from the southwestern face of the lantern.

The work was done by day labour under the foremanship of Mr. Wm. H. Whebby at a cost of \$384.

*McNab island.*—A lighthouse erected on McNab island, near the northwestern end, was put in operation on March 31, 1903.



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It is located 90 feet above high water mark  $\frac{1}{3}$  mile N.  $16^{\circ}$  E. from the south point of Finlay cove, and in the alignment of Mauger beach and Chebucto head lighthouses.

It is a square wooden building painted white with a sloping tower rising from the middle of roof surmounted by a wooden lantern and is 49 feet high from its base to the vane on the lantern.

The fixed white catoptric light, elevated 132 feet above high water mark, should be visible 17 miles in the line of range.

This light is intended to be worked in conjunction with Mauger beach light, to form a range leading in.

The work was done by day labour at a cost of \$3,578.

*Dartmouth.*—The tower of the Exhibition building, Dartmouth, Halifax harbour, has been increased in height and surmounted by a white wooden lantern, from which on 31st March, 1903, a light was shown in line with the George island revolving red light.

The height of the tower from the base to the vane on the lantern is 70 feet. It is painted white with a black diamond on the south face.

The fixed red light, elevated 140 feet above high water mark, should be visible 12 miles in the line of range. The illuminating apparatus is catoptric.

This light in one with George island light leads up the harbour from Mauger beach.

The work was done by day labour at a cost of \$737.00.

*False passage.*—A light, established on the rocky shoal lying about the centre of False passage, at the north entrance to Canso harbour, was put in operation on the 30th December 1902.

The light is a fixed green light, shown from a pressed glass lens lantern hoisted on a pole on a rock,  $\frac{1}{3}$  mile N.  $73^{\circ}$  W. from the lighthouse on Hart island. The pole was carried away by storm last winter, and this year was replaced by a pole rising from the middle of a concrete pier, built on the north end of the reef. The pier is 7 feet square by 5 feet high; its top is 3 feet above high water.

The pole rises 23 feet above the top of the pier, and the light which was first lit on the 10th November, 1903, is now 25 feet above high water mark, and should be visible 4 miles.

The light is intended principally for the benefit of local fishermen, and will be kept lit each year only during the months of November, December and January.

The work was done by day labour, at a cost of \$172.39.

*Bourgeois inlet.*—A light was put in operation on the opening of navigation in 1903, at the mouth of Bourgeois inlet, on the north side of Lennox passage, in the lighthouse reported, in last year's report, as under construction.

The lighthouse stands immediately inside of high water mark on the west extremity of the low gravel point on the east side of the mouth of the inlet, where the channel is narrowest.

The tower is a wooden building, square in plan, with sloping sides, surmounted by a square wooden lantern, the whole painted white. It is 27 feet high from the stone foundation to the vane on the lantern.

The fixed white seventh order, dioptric light, elevated 25 feet above high water mark, should be visible 10 miles from all points of approach by water.

*Clarke Cove.*—Enclosed range light towers, from which fixed red catoptric lights are shown, have been erected at Marble mountain; and the pole light hitherto maintained in the same locality has been discontinued.

Both towers are wooden structures, square in plan, with sloping sides, surmounted by square wooden lanterns, the whole painted white.

The front tower stands 20 feet above high water mark, 40 feet back from the water's edge, and about 100 yards easterly of the site of the discontinued pole light.

It is 32 feet high from its base to the top of the ventilator on the lantern.



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The light is elevated 46 feet above high water mark, and should be visible 8 miles in the line of range.

The back tower stands on the side of the mountain, 800 feet N. 42° W. from the front tower. It is 20 feet high from its base to the top of the ventilator on the lantern.

The light is elevated 244 feet above high water mark, and should be visible 11 miles in the line of range.

The new towers were erected by day labour, under the supervision of Mr. W. E. Whebby, as foreman of works, at a cost of \$1,112.

*Low point.*—A steam fog whistle is to be put in operation at this light station on January 1, 1904.

The whistle will give blasts of 10 seconds' duration, separated by silent intervals of 50 seconds.

The fog alarm building stands 34 feet back from the edge of the bank, west of the lighthouse and east of the marine signal flagstaff and light keeper's dwelling.

The building is of wood, rectangular, painted white, with a red roof. The 10-inch whistle, rising above the roof, is 60 feet above high water mark.

The building was erected by day labour, under the superintendence of Mr. J. McSween of Sydney. The total expenditure on the installation, including boilers and machinery has been \$4,600.

*Great Bras d'Or.*—Range light buildings erected near the eastern entrance of Great Bras d'Or, on the west side of Boularderie island, were put in operation, on the opening of navigation in 1903.

The front tower stands on Noir point, 35 feet back from the water's edge, and 16 feet above high water mark.

The tower is a square wooden building, surmounted by a square wooden lantern. It is 31 feet high from base to vane and is painted white.

The light is a fixed white seventh order, dioptric, light elevated 41 feet above high water mark, and visible 11 miles from all points of approach by water.

The back range tower is 46 feet high from the base to the lantern vane and stands on land 23 feet above high water mark, 1,689 feet S. 55° 15' W. from the front tower. It is a wooden building, square in plan, with sloping sides, surmounted by a square wooden lantern, the whole painted white.

The light is a fixed white catoptric light, elevated 63 feet above high water mark, and should be visible 13 miles in the line of range.

The two lights in one lead into Great Bras d'Or clear of Middle shoal and Carey point bar on the starboard and clear of Blackrock shoal on the port hand.

The buildings were erected under contract by Mr. P. L. McFarlane of Baddeck; his price was \$1,500.

*Henry island.*—The light here was put in operation on December 1, 1902, as indicated in last year's report.

## AIDS TO NAVIGATION DISCONTINUED.

*Cranberry head fog alarm.*—When the steam fog whistle on Low point is put in operation, on the first January, 1904, the steam fog horn on Cranberry head, on the opposite side of the entrance to Sydney harbour, will be permanently discontinued.

*Carey point.*—On the opening of navigation in 1903, the fixed red mast light, heretofore maintained on the north side of the entrance to Great Bras d'Or at its eastern end, was permanently discontinued, having been rendered unnecessary by the establishment of Great Bras d'Or range lights.

## CHANGES AND IMPROVEMENTS IN EXISTING AIDS.

*Seal island.*—The fog whistle at this light station, off the southwest extremity of Nova Scotia, which was formerly operated from a building near the lighthouse, has been



removed to a building erected on the extreme south point of the island, 585 feet S 26 W. from the lighthouse. At a cost of \$3,837.56.

The new fog alarm building is a long, low white, wooden, rectangular building with a shingled roof painted red, and stands on the beach. The whistles, which are in duplicate and stand above the roof, are about 49 feet above high water mark.

The whistle was operated from the new building for the first time on the 16th February, 1903.

*Baccaro.*—On the 11th July, 1903, the light shown from this lighthouse, on the east side of Barrington bay was changed from a fixed red light to a revolving white light with intervals of 30 seconds between its points of greatest brilliancy. The light shows for about 18 seconds, increasing in brilliancy to a maximum, and then decreasing to an eclipse, which lasts about 12 seconds, the apparatus completing a phase in 30 seconds.

The illuminating apparatus utilized is that formerly in use in Cape Sable lighthouse.

*Shelburne.*—The lighthouse on Sand spit, on the east side of the entrance to the harbour, has been moved on to a new foundation immediately to the eastward or on the landward side of the old wooden crib on which it formerly stood.

The new foundation is of concrete, square in plan, 17 feet high, and is whitewashed.

The work was done by day labour, under the superintendence of Mr. Amos McLellan at a cost of \$1,562.

*Terence bay.*—The light maintained on Shipley head, at the entrance to this bay, on the south coast has been improved by substituting for the lantern on a mast a stronger light, shown from an enclosed lighthouse tower.

The tower stands where the mast and shed formerly stood; it is a square wooden building with sloping sides, surmounted by a square wooden lantern, the whole painted white; it is 32 feet high from its base to the ventilator on the lantern.

The light is a fixed red light, elevated 57 feet above high water mark. It should be visible 8 miles from all points of approach by water; the illuminating apparatus is dioptric of the seventh order.

The building was erected by day labour, at a cost of \$471.

*Inner Sambro island.*—The fishing light here has been improved by substituting for the pressed glass lens lantern previously used a lantern having a dioptric lens of the seventh order.

A wooden shed painted white has also been built at the foot of the mast.

*Pictou bar.*—The lighthouse on the bar on the south side of the entrance to the harbour, was burnt down on May 26, 1903. A temporary mast has been erected on the site of the burned building. It is 48 feet high.

Two anchor lens lanterns are attached to the masthead, and show fixed white lights up the harbour and seaward.

A pressed lens lantern, showing a fixed red light, is attached to the mast on the seaward side, 20 feet below the fixed white lights.

A spherical wooden cage, painted white, to serve as a day-mark, is attached to the top of the mast, for the purpose of getting the range on with the Pictou custom-house, for vessels coming up the outside channel.

A new lighthouse is in course of construction.

*Mauger beach.*—On or about March 31, 1903, the fixed white light shown from the lighthouse was replaced by a flashing white light.

The illuminating apparatus is dioptric of the fifth order, and gives flashes of .8 second duration, separated by intervals of 6.70 seconds.

The lighthouse, including the roof is painted white; the lantern is red.

The fog signal at this station has also been improved by the substitution of a 10-inch whistle for the reed horn formerly used. The whistle is operated by compressed air, and gives blasts of five seconds' duration, with silent intervals of 20 seconds between them.



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*George island.*—Early in the spring of 1903 the two fixed white lights shown from the lighthouse were discontinued and replaced by one revolving red light shown from a polygonal iron lantern surmounting a square wooden tower adjoining the western side of the keeper's dwelling. The light is catoptric the flashes attaining their greatest brilliancy every 10 seconds. It is elevated 50 feet above high water mark, and should be visible 8 miles from all points of approach.

The lighthouse is painted white, with a black diamond on the south side, below the lantern. The iron lantern is painted red. The building is 35 feet high from its base to the vane on the lantern.

The cost of erecting the new lighthouse, which was built by day labor, and of installing the light, was \$2,813.08.

## BUOYAGE.

*Cat rock.*—On September 19, 1903, Cat rock bell buoy, was moved in a southerly direction to a new position in 9 fathoms water.

From the buoy Cape Fourchu lighthouse bears N.  $22\frac{1}{2}^{\circ}$  E., distant  $\frac{3}{4}$  mile.

*Gannet dry ledge.*—A bell buoy painted red, was on June 18, 1903, moored in 16 fathoms water, 1 mile N.  $73^{\circ}$  W. from the middle of this ledge.

*Clarke harbour.*—A bell buoy of United States Government pattern has been established in 8 fathoms water  $\frac{1}{2}$  mile N. W. from the extremity of Hospital reef.

The buoy is painted red, and is surmounted by a bell rung by the motion of the buoy on the waves.

*Bull rock.*—About January 1, 1904, a bell buoy is to be established in place of the can buoy heretofore marking this danger in the entrance to Lockeport. It will be moored in 15 fathoms water  $\frac{1}{2}$  mile S.  $17^{\circ}$  W. from the rock.

The buoy is of steel, painted black, with 'Bull rock' in white letters on the top, and is surmounted by a bell rung by the motion of the buoy on the waves.

*Indian harbour.*—Four wooden spar buoys have been placed to mark shoals in this harbour on the eastern side of Margaret bay.

*Nautilus rock.*—A black can buoy has been moored off this danger in Port Medway in view of the wooden spar buoy heretofore in use.

*Grampus rock.*—An iron can buoy has been moored in 18 fathoms water 2 cables south of this rock. It is painted black, with 'Grampus' in white letters on the deck.

This coast buoy is intended principally for the benefit of vessels bound into Turner (or Terence) bay and Pennant, and will be maintained throughout the year.

*Sambro channel.*—A wooden spar buoy, painted red, with a cone-shaped top was moored on the northwestern side of Whaletail; inside of Sambro island, and a complete list and description of the ten buoys marking the channel inside Sambro island was published in two notices to mariners.

*Halifax harbour and approaches.*—A notice to mariners was issued in July, 1903, correcting the Admiralty charts with respect to buoyage, some buoys maintained not being shown, and others incorrectly indicated.

Last winter three gas buoys, lighted by acetylene, were established. They are steel cylinders, surmounted by conical slatwork topmarks in which stand Pintsch type lanterns. The lights show fixed white at a height of 9 feet above the water. They are not under constant supervision, and may therefore be occasionally extinguished for short intervals.

(a) Middle ground. A gas buoy, painted in red and black horizontal bands, moored in 6 fathoms water, one cable south from the centre of the middle ground west of McNab island, replacing the iron can buoy heretofore maintained.



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(b) Neverfail. A gas buoy, painted in red and black horizontal bands, moored in 3½ fathoms water, 1½ cables south from the middle of Neverfail shoal, replacing the iron spar buoy heretofore maintained.

(c) Thrumcap. A gas buoy, painted red, moored in 10 fathoms water south of Thrumcap shoal, and about 30 yards outside Thrumcap bell buoy.

These three gas buoys were several times injured by collision last season, and it was therefore deemed advisable to issue an advertisement warning mariners that prosecution would follow any further careless or malicious injury to them.

It is intended to place a bell buoy to mark Pleasant shoal about 20th December, 1903, instead of the Can buoy heretofore used. It will be of steel, painted black with 'Pt. Pleasant' in white letters, and will be surmounted by the usual bell.

*New Harbour head.*—On the 11th November, 1903, a bell buoy was established in 10 fathoms water half mile S. 22° W. from the southern extremity of this head, in Guysborough county to guide vessels bound westerly into the eastern entrance to the sound, or as a point of departure for vessels bound easterly, or into adjacent harbours. It will be maintained during the season of navigation.

The buoy is painted red, with 'New Har. Hd.' in white letters on the deck, and is surmounted by a bell rung by the motion of the buoy on the waves.

*Lennox passage.*—A set of new wooden spar buoys has been supplied and placed to mark the shoals through this much frequented passage, and steel can buoys have replaced the wooden spar buoys heretofore marking Thomas shoal and Grandigue shoal.

*Wallace harbour.*—In June, 1902, three buoys were placed to mark the entrance of the harbour over Ship bar. These will hereafter be maintained in addition to the eight buoys previously marking the channel into the harbour over Oak island bar, and in the harbour.

A notice to mariners was issued describing the buoyage of the harbour, and giving sailing directions for using them.

*Winter buoy service.*—The minister has issued instructions that all the bell buoys and whistling buoys on the south and east coasts of Nova Scotia from Pennant point westward of Halifax, to Cape North, Cape Breton, will be maintained all the year round, with the exception of Cape Breaker bell buoy, Grime shoal whistling buoy, Louisbourg whistling buoy and Louisbourg bell buoy which will be replaced for the winter each year by wooden spar buoys coloured similarly to the signal buoys, and Canso harbour bell buoy, Fourchu bell buoy and Point Aconi whistling buoy which will be taken up for the winter each year.

## NEW BRUNSWICK LIGHTHOUSE DIVISON.

The New Brunswick division comprises all the lighthouses and other aids to navigation within the boundaries of the province both on the Bay of Fundy and on the Gulf of St. Lawrence coast. The large buoys maintained by the government on the Nova Scotia coast of the Bay of Fundy are attended to by the steamer *Lansdowne*, under the direction of the New Brunswick agent, but are otherwise under the control of the Nova Scotia agent.

This division is under the charge of Mr. F. J. Harding, agent of the department at St. John, N.B.

The lights and other aids to navigation were inspected by Mr. John Kelly, inspector of lights.

There are in this agency 132 lighthouses, 2 lightships, 12 steam fog-alarms, and one fog-bell station, under the charge of lightkeepers and engineers.

The method of supplying the lights varied in accordance with location. The supplies for St. John river, Grand lake and Washademoak lake lights were shipped by direct steamers, and a separate bill of lading furnished for each station.



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The supplies for the Miramichi river lights were sent by the lightship *Frederick Gerrring* and by regular line of steamers or schooners trading to the different points.

The Bay of Fundy lights were supplied by the steamer *Lansdowne*, and those in Chaleur bay were supplied by rail. In all cases the supplies have been delivered in the most convenient and economical way.

## NEW AIDS TO NAVIGATION.

*Cherry island*.—On June 16, 1903, a fog bell was established on the southwest point of Cherry island at the entrance to the river St. Croix.

The fog bell tower is a square, wooden building painted white, surmounted by a bell. The building is 17 feet high.

The fog bell, elevated 43 feet above high water mark, is operated by machinery, and during thick or foggy weather will give two strokes in quick succession every six seconds.

The work was done by Mr. J. Kelly, superintendent of lights, at a cost of \$633.32. The machinery cost \$400.

*Letite*.—A lighthouse erected at the fog alarm station on Mascabin point, was put in operation on September 1, 1903. It stands a few feet northwestward of the fog alarm building, on a site 11 feet above high water mark. It is an octagonal wooden tower, painted white, surmounted by a red, octagonal, iron lantern. It is 43 feet high from its base to the top of the ventilator on the lantern.

The light is a fixed white light, dioptric, of the seventh order, elevated 48 feet above high water mark, and should be visible 12 miles from all points of approach by water.

The work was done under contract by Mr. C. L. McKeen, of St. Andrews. His contract price was \$800.

*Gull Cove*.—A light was established here as a guide for fishing boats on December 30, 1902.

The light is fixed white, shown from a lantern with a pressed glass lens, hoisted on a mast. It is elevated 90 feet above high water mark, and should be visible 6 miles from all points of approach by water.

The mast is 35 feet high, and stands about 600 feet back from the shore in the bottom of the cove, near Mr. Lewis Frankland's house.

*Tiner point*.—A fog alarm will be put in operation here on or about February 1, 1904.

Tiner point is the most prominent headland on the coast between Split rock and Negro head, and the fog alarm building, a rectangular wooden structure painted white, stands on the summit of the headland, with the horn projecting from its sea-ward face, elevated about 100 feet above the sea.

The fog alarm consists of a diaphone operated with air compressed by oil engines. It will give blasts of three seconds' duration every minute.

The building is being erected by contract by Mr. John Flood, of St. John, his price for the work being \$9,781.08.

*Anderson hollow*.—A lighthouse has been built here to replace the old one on the government breakwater carried away on January 12, 1902. It stands on the edge of the bank on the shore north of the breakwater and directly opposite its outer end.

It is a wooden tower, square in plan, with sloping sides, surmounted by a square wooden lantern, the whole painted white, and 31 feet high from its base to the vane on the lantern.

The light was shown for the first time from the new building on the opening of navigation in 1903. It is a fixed *white* light, elevated 91 feet above high water mark, and should be visible six miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.



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A hand fog horn at the lighthouse is blown in answer to fog signals of vessels approaching the breakwater.

The temporary light and fog horn maintained on the breakwater were discontinued when this permanent station was put in operation.

The building was erected by Mr. W. C. Anderson, of Waterside, whose contract price was \$362.

*Black Lands gully.*—Range lights, established on the south end of the north beach were put in operation on July 22, 1903, and will hereafter be maintained whenever fishing operations are being carried on in the neighbourhood.

The lights are fixed white lights shown from pressed lens lanterns hoisted on masts painted white, with white sheds at their bases. The front mast is 26 feet high and the back mast 37 feet high.

The front light is situated on the sand beach 40 feet back from the shore at high tide.

The light is elevated 29 feet above high water mark, and should be visible 10 miles from all points of approach by water.

The back light is situated 137 feet from the front light. It is elevated 42 feet above high water mark and should be visible 11 miles from all points of approach by water.

*Sapin point.*—A pole light, established in the settlement of Sapin point, at the north extremity of Kouchibouguac bay, was put in operation on May 28, 1903, and will hereafter be maintained whenever fishing operations are being conducted in the neighbourhood.

The light is fixed white, shown from a seventh order lens lantern hoisted on a pole. It is elevated 50 feet above high water mark and should be visible 12 miles from all points of approach by water.

The pole is painted white, is 34 feet high, and has a white wooden shed at its base. It stands 50 feet back from the edge of the sandstone cliff which forms the shore; between Messrs. Loggie's lobster factory and the Roman Catholic church.

*Caraquet.*—Range light towers have been erected at Lower Caraquet, to lead into the harbour through Caraquet channel and the lights were put in operation on September 24, 1903.

The towers are inclosed wooden buildings, square in plan, with sloping sides, surmounted by square wooden lanterns, the whole painted white.

The front tower stands close to the shore, on the point below Stoke point.

It is 30 feet high from its base to the top of the ventilator on the lantern.

The fixed white light is elevated 31 feet above high water mark, and should be visible 10 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The back tower is distant 3,800 feet from the front tower. It is 45 feet high from its base to the top of the ventilator on the lantern.

The fixed white light is elevated 70 feet above high water mark and should be visible 10 miles in the line of range. The illuminating apparatus is catoptric.

A contract for the erection of these range light buildings was awarded to Mr. J. R. Chiasson, of Lower Caraquet, in 1902, but he proved unable to do the work, which was therefore completed by Mr. John Kelly, Inspector of Lights. Accounts in connection with the work have not yet been settled.

#### AID TO NAVIGATION DISCONTINUED.

*Hatfield point.*—The back range light at this point on Belle Isle bay has been discontinued, and the front light will hereafter be maintained as a single beacon light.

#### CHANGES AND IMPROVEMENTS IN EXISTING AIDS.

*Bliss island.*—The lighthouse has been increased in height, and the former wooden lantern replaced by an octagonal iron lantern. The tower is painted white and the



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<sup>1</sup> lantern red. The height of the building, from its base to the vane on the lantern is now 40 feet.

The light is changed from fixed white to occulting white, the light showing for 10 seconds and eclipsed for 5 seconds alternately. The illuminating apparatus is dioptric of the fifth order. The light is elevated 55 feet above high water mark, and visible 12 miles from all points of approach by water.

These improvements, which were made under the direction of our local agent, cost \$1,248.43.

*Escuminac.*—The steam fog-alarm was shut down for a few days in July, 1903, for repairs.

*Grant beach.*—The range lights have been improved by substituting for the lights shown from masts stronger lights shown from enclosed lighthouse towers, which have been built on the sites formerly occupied by the masts and trestle work on which they stood.

The new towers are wooden buildings, square in plan, with sloping sides, surmounted with square wooden lanterns, and are painted white throughout. Each tower is 37 feet high, from its base to the ventilator on the lantern.

The lights are, as heretofore, fixed white. That shown from the front tower is dioptric, of the seventh order, is elevated 69 feet above highwater mark, and is visible 4 miles from all points of approach by water; that shown from the back tower is catoptric, is elevated 107 feet above highwater mark, and visible 4 miles in the line of range and also up the river.

The two lights in range, bearing N. 66° W. mark the channel from the conical buoy at the narrows of Sheldrake channel up to abreast of Malcolm point.

The new buildings were erected by Mr. Alex. Fitzgerald, of Newcastle; his contract price was \$1,250.00.

*For island.*—The intensity of the three range lights shown from lanterns on masts at the northwest end of the island, has been increased by substituting lanterns with dioptric lenses of the seventh order for the pressed lens lanterns formerly used. The frame works from which the old lanterns were shown have also been replaced by new masts, with sheds at their bases.

*Miscou island.*—The fog-alarm at Birch point lightstation was discontinued for a few days in July, 1903, for repairs to the operating machinery.

*Shippigan gully.*—The colour of the front range light on Indian point was, on September 26, 1903, changed from red to white. The present fixed white light is visible 10 miles from all points of approach by water.

The mast carrying the back light has been increased in height 10 feet. The fixed white light, shown from a lantern hoisted on a mast, is now elevated 46 feet above high water mark, and should be visible 12 miles. The height of the mast is 46 feet. The mast and shed at its base are painted white.

*North Tracadie.*—The outer range light at this gully, discontinued in September, 1901, was re-established on 5th June, 1903.

The fixed white light is shown from a pressed lens lantern, hoisted on a mast painted red. It is elevated 20 feet above high water mark, and should be visible 4 miles.

The mast stands on the sands 161 feet S. 48° E. from the back tower.

The two lights in one, lead to the red can buoy moored in 4½ fathoms water on the outside of the bar, and should be kept on until the red can buoy at the mouth of the gully is made; thence the tortuous channel up to 'the block' is marked by buoys and stakes.

*Zephyr rock.*—The lightship was placed on her station in Shediac harbour for the autumn, on or about 15th October, 1903, and was maintained thereon until the close of navigation.



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*Richibucto harbour.*—The channel through the bar across the entrance to the harbour having been shifted by the winter gales and action of the ice, the bar range lights have been changed to suit the same, and in one lead to the black can buoy at the entrance.

The back light of this range has been removed to the tower used from 1895 to 1900 as the back range tower of the old bar range.

The light is a fixed white light, elevated 44 feet above high water mark, and visible 12 miles in the line of range. The illuminating apparatus is catoptric.

The tower is of wood, with an open frame, surmounted by an enclosed square lantern, and is painted white. It is 43 feet high from the ground to the ventilator on the lantern. It stands on the south shore of the south beach, 2,760 feet N. 54° W. from where the back mast of the bar range stood last year, and 325 feet S. 64° W. from the old tower with dwelling attached, used previous to 1900 for the front light of the bar range.

The front light is shown from a pressed glass lens lantern hoisted on a mast on the north side of the south beach.

It is 130 feet back from the water's edge, and is distant 366 feet N. 81° E. from the back range lighthouse.

The light is a fixed white light, elevated 32 feet above high water mark, and visible 10 miles.

There is a depth of 10 feet over the bar in the best water.

The two masts from which the bar range lights were shown last year, half a mile eastward of the present bar range lights, have been removed; the old tower used for the back light of the bar range previous to 1895 has been taken down; but the old tower with dwelling attached, used up to 1900 for the front light of the bar range still stands, being utilized as a dwelling, though no light is shown from it.

The back light of the channel range has been moved and is now located 472 feet from the front light.

#### BUOYS AND BEACONS.

*St. Andrews.*—The west beacon, referred to in last year's report, has been replaced by a new one built 36 feet southeast from the site of the old one, which has been entirely removed. The new structure is similar to the old one, being built of cribwork in the form of the frustum of a square pyramid, 30 feet square at the base and 26 feet high, raising 6 feet above high water mark. From the middle of the pier rises an iron mast 24 feet high, carrying on its top a triangle of slatwork.

The work was done under the supervision of Mr. John Kelly, inspector of lights, and cost \$1,208.19.

*Chambers rock.*—On January 1, 1903, a conical buoy was established off this rock in Little passage, replacing an inferior buoy previously maintained there.

The buoy is of steel, painted red, with the words 'Chambers rock' in white letters. It is moored in 5 fathoms water, 90 feet west of Chambers rock, which has but 5 feet on it at low water.

*Bliss harbour.*—On January 1, 1903, two steel can buoys were placed off Man of War rock, instead of the wooden buoys heretofore used.

These buoys are painted black, with the words 'Man o' War rock' in white letters.

One of them is moored in 6 fathoms water 300 feet from the south-west end of Man of War rock, which covers at high water. The other is moored in 9 fathoms, 150 feet east of the same rock.

*L'Etang harbour.*—On December 31, 1902, an iron can buoy was established off Mink island, entrance to L'Etang harbour and eastern entrance to Bliss harbour replacing the wooden spar buoy previously maintained.

The buoy is painted black, with the words 'Mink island' in white letters. It is moored in 8 fathoms water, east of Mink island.



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A steel conical buoy was at the same time established west of Roaring Bull rocks, at the entrance to the harbour, replacing the spar buoy previously maintained. The buoy is painted red, with the words 'Roaring Bull' in white letters, and is moored in 9 fathoms water.

*Partridge island.*—The bell boat maintained off the eastern side of the island lost its top hamper late in 1902 by storm and while repairs were being made to it a bell buoy of Trinity House pattern was temporarily moored at the same site.

This was replaced by the old bell boat which had done service for upwards of 40 years, but on February 11, 1903, the old boat sank at its moorings. Finally on May 26, the new bell boat was replaced on the station, with new bell and fittings of stronger construction.

*Round reef*, in St. John harbour, is marked by a red iron can buoy maintained by the corporation of the city. It is moored in 6 feet water, N. 53° 26' E. one cable from the beacon light. This buoy ought to be changed in shape to conical, and the attention of the corporation has been drawn to their departure from the international rules governing the shapes of buoys.

*Quaco.*—The department issued instructions that the bell buoys on the ledge and reef, and conical buoy on the shoal, should be kept in position all the year round. In November, 1902, three clean buoys were placed in position with good moorings. In March and April last all these buoys were adrift, and on May 19 and 20 were replaced by new buoys. Two of the missing buoys were ultimately recovered, but one, a Trinity House bell buoy, was lost.

*Buctouche.*—In 1902 the undersigned visited this harbour, and reported the buoyage maintained under contract in very unsatisfactory condition. Since that time the buoys in the harbour and approach have been improved under the supervision of Capt. McKinnon, D.G.S. *Brant*, four spars having been replaced by cask buoys, and three cask buoys by two steel cans and one steel conical buoy.

Between the turn of channel and Priest point the sides of the channel are marked by bushes on the north side and black pickets on the south side, all driven into the mud banks.

The buoy on Priest point is now a red cask, instead of a red spar.

From Priest point to the bridge the sides of the channel are marked by five black pickets on the south side and by bushes on the north side.

*Richibucto.*—In addition to the twenty-eight buoys formerly maintained by Mr. James Legooof in Richibucto, Albion and North channels, he was authorized last year to place and maintain one extra buoy.

*Kouchibouguac and Black rivers.*—The department authorized the bushing of these rivers by the harbour master, whose account for the same amounted to \$25.00.

*Pokemouche.*—An iron can buoy, painted black, has been established in 3 fathoms directly outside the entrance to this gully. Fishing vessels make this buoy, whence the best water through the gully is shown by spar buoys.

*Shippigan gully.*—In consequence of a report made by the undersigned as a result of inspections, condemning the buoyage of Shippigan gully and sound, it has since been improved so that the starboard buoys and stakes can be readily distinguished by a stranger from those marking the port side of the channel.

Entering the gully from the southward, a red can buoy is found in the alignment of the range lights outside the bar, thence to the sharp turn inside Taylor island break-water there are 3 more red can buoys, all these red buoys must be kept close on board. At the last of them the channel turns short towards the lighthouse on Shippigan island. From this point to the government wharf the channel is very narrow, winding its way through extensive mud flats covered with eel grass, and is well defined by pickets driven in the bank close to the edge, and by spar buoys. The starboard pickets and buoys are



red and are surmounted by cones, the port marks are plain and are black. The last point near the wharf is marked by a dolphin surmounted by a barrel, painted black. From the government wharf northward to Caraquet channel the channel is similarly buoyed and staked, but the colours are reversed, red marks being on the starboard hand in entering from the north.

*Pokesnedie*.—The red buoy marking the northeast extremity of the shoal has been changed from a small can buoy to a large red, steel, conical buoy.

*Restigouche river*.—The wooden buoy marking the end of Maguacha spit has been replaced by a red iron conical buoy, moored in  $2\frac{1}{2}$  fathoms of water; the wooden buoy moored in the north side of Dalhousie Middle or ballast ground, by a black iron can buoy, moored in the same depth; and the wooden buoy moored off Garde point, by a black iron can buoy, moored in 9 feet water.

### PRINCE EDWARD ISLAND LIGHTHOUSE DIVISION.

This division which embraces the whole province, is under the charge of Mr. Artemas Lord, agent of the department at Charlottetown, who also acts as inspector of lights. The general routine of the office work has been performed by the agent, assisted by Mr. Laurence W. Watson, as clerk. The work of superintending more extensive repairs at existing stations has been done under Mr. M. Walsh, as foreman of works. Under the agent's instructions, Mr. Walsh is also warehouseman for the lighthouse stores in Charlottetown.

There are in the division, 66 lights at 39 stations, and one fog-horn, under the charge of 45 keepers. There are three automatic whistling buoys and one bell-buoy. The majority of lights are situated on headlands and serve the general purposes of navigation, the remainder being harbour lights intended particularly for the benefit of fishermen. There are thirty harbours buoyed under the system of three years contracts, and seven in which buoys are maintained by the department under the local harbour masters.

All the stations on the island were inspected by the agent on the annual supply trip last summer, which was made on the D.G.S. *Brant*, Capt. McKinnon.

#### CHANGES AND IMPROVEMENTS IN EXISTING AIDS.

*Souris east*.—The fixed red light shown from a lantern on a mast on the outer end of the breakwater has been increased in intensity by substituting for the lantern with a pressed glass lens heretofore used a lantern with a cut glass lens of the 7th order.

*New London*.—During the past winter heavy ice grounded off the entrance to this harbour on the north coast of Prince Edward Island; causing the heavy current running out of the harbour to scour a new channel through the outer bar, with  $9\frac{1}{2}$  feet at low water in it now close up to the rock reef at Simms' shore, farther to the northwest than that indicated by the range lights, which was filled up.

It was therefore necessary to extinguish the fixed white front light temporarily. In July it was found possible to place temporary range lights to indicate the new channel through the bar at the entrance to the harbour.

The front light of this range is shown from the old front range tower, which stands in its old position 1,500 feet from the red light. It is as heretofore a fixed white catoptric light elevated 24 feet above high water mark, and should be visible 10 miles in, and over a small arc on each side of the line of range.

The back light of the new range consists of a fixed white light, shown from a square lantern hoisted on a mast. It is elevated 31 feet above high water mark, and should be visible 10 miles in, and over a small arc on each side of the line of range. The illuminating apparatus is catoptric.

The mast stands on the beach, distant 1,019 feet S.  $48^{\circ}$  W. from the front light. The mast and the small shed at its base are painted white.



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The two lights in one, lead over the bar in past Simms point with 9½ feet water at low tide. The old back red light is continued as a coast light.

The buoys at the entrance of the harbour were changed in place to mark the new channel, and show the best water into the harbour during daylight.

*Northport.*—The towers from which the range lights are shown have been enclosed and painted white.

## BUOYAGE.

*Wood islands.*—For the purpose of marking the channel used by small craft between Wood islands and Indian rocks, off the southern coast of Prince Edward Island, the following buoys were established on May 26, 1903 :—

(a.) A steel conical buoy, painted red, with 'Rifleman reef' in white letters on it, in 15 fathoms water off the south-west point of Rifleman reef, which runs out westward from Bell point.

(b.) A red spar buoy in 13 feet water off Kenneth bank.

(c.) A red cask buoy in 3¾ fathoms water off the south-west extremity of Wood islands.

*Crapaud road.*—The black can buoy, formerly moored off Brockelsby head, has been replaced by a steel, conical buoy, painted red, with the word 'Crapaud' in white letters, moored in 18 feet water.

A black cask buoy is moored in 12 feet water off the east extremity of Tryon shoals.

Another similar black cask buoy, marking the best anchorage in Crapaud basin, is moored in 12 feet water off the entrance to the dredged cut leading up to the wharfs.

The dredged cut leading from the basin to the wharfs is marked as follows :

At south end a black spar buoy is anchored on the port side in 12 feet water. Two other black spar buoys are anchored at equal intervals on the port edge of the cut in 4 feet water. A black stake is driven at the north end of the cut on the port side. A red spar buoy is anchored in 9 feet water on the starboard side opposite the last described stake.

*Cascumpeque.*—A steel conical buoy, painted red, with 'Cascumpeque' in white letters, has been moored in 29 feet water off the outer bar at the entrance to the harbour, in place of the spar formerly maintained.

## BRITISH COLUMBIA LIGHTHOUSE DIVISION.

This division comprises all Canadian waters on the Pacific coast and the inland navigation systems of British Columbia, and is under the charge of Captain James Gaudin, agent of the department at Victoria, who also acts as inspector of lights.

There are in this province thirty-two light-stations, at six of which are steam fog-alarms, and at six others bells are rung by machinery. There are three beacon lights in Victoria harbour, and one similar light in Nanaimo harbour.

The lights are in charge of thirty-four light keepers, some of whom supply assistance out of the salaries allowed.

The lights are supplied by the Dominion steamer *Quadra*, Capt. J. T. Walbran, master, and the fog-alarm machinery at the several stations was periodically inspected by the engineers of the *Quadra*.

## NEW AIDS TO NAVIGATION.

*Lennard island.*—It is proposed to erect a lighthouse on this island, at the Templar channel entrance to Clayoquot, to serve as a coast light and also to mark the entrance to the sound.

The site for the propose lighthouse, which is very uneven rocky ground, has been cleared of trees; about 10 acres have been slashed and the fallen trees have been moved



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and burned at a cost of \$1,120. Plans and specifications for the lighthouse are in the hands of the agent, who will erect it by days' work next season.

*Dock island.*—A light was put in operation on the 18th April, 1903, on Dock island, the northeasterly islet of Little group, Sidney channel.

It is shown from a 31-day Wigham lamp placed upon the summit of a square, wooden tower standing on a wooden framework, the whole painted white. The tower stands on the east end of the islet.

The light is a fixed white light, elevated 40 feet above high water mark, and should be visible 10 miles from all points of approach by water. The illuminating apparatus consists of a pressed glass lens. The light is unwatched.

The small tower was erected and the light installed under the superintendence of our local agent.

*Fraser river mouth.*—Two beacon lights were put in operation on the 1st March, 1903, on the Sand heads.

They are fixed lights, shown from 31-day Wigham lamps, elevated 22 feet above high water mark, and should be visible 9 miles from all points of approach by water. The illuminating apparatus consists of pressed glass lenses. The lights will be of the class of unwatched lights. Each structure consists of a square wooden tower, 8 feet high, painted white, standing on a platform supported on piles.

The more easterly structure, known as North dam lighthouse, stands at the southwest end of the dam across the opening to the northward, on the south edge of the sand head on the north side of the main channel into the Fraser river, and to the north of No. 2 red buoy.

The light is S.  $72^{\circ} 51'$  W.  $1\frac{3}{4}$  miles from Garry point light, and a line joining the two lights is directly in the channel and brings the red buoys on the starboard side in entering.

During the freshet in the spring of the year it was found necessary temporarily to remove the lamp for safety, but the operation of the light was resumed as soon as the state of the river permitted.

The more westerly light, known as South curve lighthouse, originally stood on the north edge of the sand heads on the south side of the main channel into the Fraser river, southwardly from No. 4 black buoy; about 2 miles S. by W. from north dam lighthouse where a line from Sand heads bell buoy was almost directly in the channel, and brought all the black buoys on the port side in entering.

In consequence of the scouring of the bed of the channel during the spring freshet it became necessary to remove this lighthouse 600 feet to the southward of its original position and mariners were warned that changes in the channel are sudden and frequent when the river is in freshet, so that it is impossible to issue a notice to mariners that can be relied upon for any length of time, but the beacon structures will be kept on the edge of the channel and removed, without notice being given, to safe ground whenever the sites they occupy become unsafe.

Both these lights were originally white, but while the salmon were running so many fishing boats carrying white lights were on the Sands heads that it was impossible to distinguish between their riding lights and those shown from the lighthouses; it was therefore arranged that the two beacon lights should be fixed red from the 1st July to the 30th September in each year. During the remainder of the year the lights will be fixed white as heretofore.

*Miami reef.*—A light was put in operation on April 17, 1903, on the bow of the wreck of the steamer *Miami* stranded off White rock, Stuart channel. The bow of the wrecked steamer, on which the light is placed, lies in  $5\frac{3}{4}$  fathoms water, 934 feet N.  $49^{\circ}$  W. from the northwest point of White rock.

The light is shown from a 31-day Wigham lamp placed upon the summit of a small, square, wooden tower, painted white, standing on a wooden framework on the bow of the wreck.

The light is a fixed white light, elevated 19 feet above high water mark, and should be visible nine miles from all points of approach by water. The illuminating apparatus consists of a pressed glass lens. The light is unwatched.



## SESSIONAL PAPER No. 21

*Coffin islet.*—A light was put in operation on April 16, 1903, on this islet, northern part of entrance to Oyster harbour, Stuart channel.

The light is shown from a 31-day Wigham lamp placed upon the summit of a small, square wooden tower standing on a wooden framework, the whole painted white. The tower stands on the middle of the islet.

The light is a fixed white light, elevated twenty-nine feet above high water mark, and should be visible ten miles from all points of approach by water. The illuminating apparatus consists of a pressed glass lens. The light is unwatched.

*Merry island.*—A lighthouse has been erected on the summit of the low point forming the southeast extremity of Merry island, at the southeast entrance to Welcome pass, which separates Thormanby island from Seechelt peninsula off the southwest coast of the mainland.

The light is shown from an octagonal wooden lantern, standing on the roof of the lightkeeper's dwelling, which is a rectangular wooden building with a mansard roof. The lantern and building are painted white throughout. The height of the lighthouse from the base to the ventilator on the lantern is 35 feet.

From November 6, 1903, until the permanent illuminating apparatus is ready for installation, a temporary fixed white light will be shown from this station. It is elevated 57 feet above high water mark, and should be visible 6 miles from all points of approach by water.

The lighthouse was erected by day labour, under the superintendence of Mr. P. G. Fenton, of Vancouver.

## CHANGES AND IMPROVEMENTS IN EXISTING AIDS.

*Egg island.*—The lighthouse on the islet close to the westward of Egg island, has been moved 64 feet from the place where it formerly stood, to the extreme summit of the islet, to protect it against waves, and has been placed upon a substantial concrete foundation. The cost of removal, which was done by Mr. A. O. Roy with the assistance of the crew of the *Quadra*, was \$1,612.

*Dryad point.*—A red sector was inserted in this light at the request of mariners, who complained that the light was so bright when close aboard, that they could not correctly estimate their distance in rounding the point.

*Balfour.*—During the freshet last spring the pole and shed from which a light was shown, was carried away by a flood, since which time a temporary anchor light has been maintained, pending the construction of a new building.

*Kaslo.*—The electric light maintained under an arrangement with the Kootenay Electric Company, on the end of the spit, is moved back, when the lake rises during the summer months, to a safe distance from high water mark, and moved forward to the end of the channel when the waters of the lake subside.

## BUOYAGE.

*Sydney.*—A small uncharted rock, on which the ss. *Victorian* struck, lying off the railway wharf at Sydney, was located by Capt. Hackett and later, more accurately, by Capt. Walbran, has been made by a platform buoy, surmounted by a pyramid of lattice work, the whole painted red, moored  $\frac{1}{4}$  cable east of the rock.

*Victoria rock.*—A steel can buoy, painted in red and black horizontal bands, is moored on the north-west edge of the rock in 6 fathoms water.

*Portier pass.*—The fairway buoy off Portier pass, has been moved from the alignment of Portier pass range lights to a new position 250 feet to the westward of the alignment, where it is moored in 17 fathoms water.



*Kelp bar.*—The beacon marking the east side of the crossing on Kelp bar, off the north end of Denman island, having been destroyed during late gales, the eastern side of the crossing has been marked by a red spar buoy moored in 3½ fathoms water.

*Watson rock.*—A beacon was last autumn built by the crew of the *Quadra* on this danger, off the southwest side of Gibson island, western entrance to Grenville channel, consisting of a wooden pyramid, with a square base, painted white, supported on concrete piers, and surmounted by a slatwork top painted red. The beacon is 22 feet high. This beacon was carried away by storm in november, 1903, and will be replaced by a more substantial structure next year.

The rock covers 5 feet at extreme high water.

LIST of Buoys maintained by the Department of Marine and Fisheries in Canadian Waters in 1903.

ONTARIO AND PORTIONS OF QUEBEC IN ONTARIO LIGHTHOUSE DISTRICT.

	No. of buoys.		No. of buoys.
Amherstburg, including Bois Blanc .....	44	Pancake shoal, bell-buoy.....	1
Bar point, gas buoy.....	1	Parry Sound.....	26
Bay of Quinte (three contracts).....	32	"    gas-buoys.....	3
Bears Rump.....	1	Pelee middle ground.....	3
Big Duck island, bell-buoy....	1	Pembroke..	20
Byng inlet.....	7	Pointe au Baril, beacons..	15
Collingwood .....	14	"    buoys.....	4
Clapperton channel.....	8	Penetanguishene.....	10
Georgian bay .....	12	Port Arthur.....	1
Goderich .....	2	Port Rowan..	10
Green shoal.....	1	Rainy river, beacons, pairs..	11
Grecian shoal .....	1	"    buoys .....	14
Grubb reef, gas-buoy.....	1	River Thames.....	7
Hawkesbury .....	16	Rondeau .....	6
Kaministikwia .....	20	St. Lawrence river, Montreal to Kingston, spars	144
Lake Erie, maintained by 'Petrel'.....	3	"    "    can-buoys.	13
Lake Nipissing.....	32	"    "    gas-buoys..	27
Lake of the Woods, including bell-buoy.....	115	Ste. Placide, stakes and buoys.....	40 or 50
Lake Simcoe. ....	12	Sault Ste. Marie .....	20
Lake Superior, including bell-buoy.....	7	"    canal approaches..	25
Little Current.....	8	Seine river and Grassy lake, piles .	30
Lone rock, bell-buoy.....	1	"    buoys.....	10
Midland.....	7	South Baymouth.....	4
Murray canal and Presqu'ile bay .....	23	Stokes bay.....	6
Napanee .....	14	Surprise shoal, bell-buoy.....	1
Niagara, bell-buoy .....	1	Trenton .	11
Orillia.....	9	Waubashene. ....	37

QUEBEC.

Agnes.....	1	Little river west.....	1
Amherst harbour.....	8	Maria .....	1
Bonaventure.....	1	Matane... ..	4
Cap Chat.....	1	Mont Louis.....	1
Cape Cove.....	1	New Richmond .....	3
Cap Meule.....	1	North channel, Island of Orleans...	12
Carleton point .....	1	Nouvelle .....	1
Chicoutimi .....	15	Paspebiac .....	1
Cock point. ....	1	Pentecost.....	1
English bay .....	3	Percé.....	2
Fox river.....	1	Port Daniel.....	1
Gaspé .....	5	Restigouche river.....	10
Grand Entry.....	13	Richelieu rapids, balises.....	
Griffin cove .....	1	"    river, to St. Johns....	35
House harbour, Magdalen islands..	6	"    "    above St. Johns.....	19
Lake St. John—		Rivière à la Pipe, Lake St. John.....	8
River Ashuapmuchuan .....	68	Rivière des Prairies.....	10
"    Mistassini .	120	Ste. Adelaide de Pabos.....	1
"    Peribonka .....	24	Ste. Anne river.....	1
Roberval harbour .....	3	St. Thomas .....	8
—	215		



## SESSIONAL PAPER No. 21

LIST of Buoys maintained by the Department of Marine and Fisheries, &c.—*Continued.*QUEBEC—*Concluded.*

	No. of buoys.		No. of buoys.
St. Lawrence river between Quebec and Montreal, gas-buoys.....	19	Maintained by Quebec agent below Quebec, gas-buoys.....	15
St. Lawrence river between Quebec and Montreal, unlighted buoys.....	256	Maintained by Quebec agent below Quebec, unlighted buoys.....	32
Serpent reef.....	1		

## NOVA SCOTIA.

Advocate harbour.....	6	McKinnon harbour.....	4
Apple river.....	8	Musquodoboit.....	7
Arichat.....	21	Northport.....	12
Argyle river and sound.....	10	North Sydney.....	5
Avon river.....	6	Parrsboro.....	6
Barrington.....	52	Petitdegrat.....	11
Bear river.....	12	Pictou.....	6
Beaver harbour.....	2	Popes harbour.....	3
Blandford.....	5	Port Felix.....	7
Bridgewater.....	10	Port Hood.....	7
Canning or Habitant river... (6 dolphins).		Port Le Tour.....	12
Canso and St. Andrews passage.....	28	Port Medway.....	9
Cape Negro or North-east harbour.....	17	Port Morien.....	2
Cariboo.....	6	Port Hebert.....	12
Chester.....	23	Pubnico.....	18
Cheticamp.....	12	Pugwash.....	9
Chezzetcook and Petpiswick.....	6	Prospect, Lower.....	10
Christmas island and Barra strait.....	11	Queensport.....	3
Clarks cove, West bay.....	3	River John.....	3
Clarks harbour.....	17	Roseway.....	3
Cockerwit pass and Woods harbour.....	20	St. Anns.....	3
Cooks cove, Toby cove.....	4	St. Mary river.....	8
D'Escousse and Lennox passage.....	27	" up to Sherbrooke.....	18
Digby and Annapolis.....	13	St. Peter bay.....	16
Dover.....	4	St. Peters inlet.....	10
East bay, Bras d'Or.....	2	Sambro.....	11
Great Bras d'Or.....	7	Shag harbour.....	13
Gillis point, Boulaceet.....	1	Sheet harbour.....	9
Guysborough.....	3	Shelburne.....	10
Hay cove.....	8	Ship harbour.....	9
Harbour au Bouche..... (6 stakes).	4	Ship rock.....	1
Ingonish, South bay.....	8	Shulee.....	8
Isaacs harbour.....	12	Smith island.....	1
Jeddore.....	9	Sydney.....	2
Judique.....	1	Tangier.....	4
Ketch harbour.....	6	Tatamagouche, 46 stakes and.....	18
L'Ardoise.....	3	Terrence bay.....	3
Lahave.....	8	Tor bay.....	19
Little narrows.....	10	Three Fathom harbour.....	5
Little Dover.....	9	Tidnish.....	5
Little Bras d'Or.....	2	Tusket (two contracts)... (3 spindles).	23
Liverpool.....	3	Upper Prospect.....	4
Lockeport.....	6	Wallace.....	14
Lunenburg, back cove.....	9	West bay.....	3
" middle south.....	16	West Dublin and Crooked channel.....	13
Louisburg.....	7	Westport.....	3
Mabou.....	12	Weymouth.....	13
Mahone bay and Chester.....	12	Whitehead.....	9
Main-à-Dieu.....	6	Yarmouth.....	50
Margaree harbour.....	9	Maintained by agency..... (whistling-buoys).	23
Merigonish.....	6	" " (bell-buoys).	21
Marie Joseph.....	5	" " (conical and can-buoys).	145
Montsellier.....	10		



LIST of Buoys maintained by the Department of Marine and Fisheries, &c.--Continued.

NEW BRUNSWICK.

	No. of buoys.		No. of buoys.
Bathurst . . . . .	26	Miramichi.....	18
Baie Verte and Port Elgin.....	36	Musquash . . . . .	7
Bay du Vin . . . . .	7	Neguac.....	21
Beaver and Blacks harbour . . . . .	9	Neil harbour.....	1
Big Shemogue.....	7	Napan river, 24 stakes and.....	3
Black brook, Miramichi river.....	3	Northwest arm, Miramichi.....	6
Black Landsgully . . . . .	12	Oromocto.....	7
Buctouche . . . . .	16	Ox island, St. John river . . . . .	5
"    stakes.....	32	Petit Rocher. . . . .	2
"    river, bushes.....	200	Pisarinco . . . . .	2
Campobello, 1 spindle and . . . . .	9	Pokemouche . . . . .	8
Caraquet... . . . .	21	Richibucto and Albion.....	28
Cocagne, stakes, 30.....	11	"    Rexton and Browns yard.....	30
Dalhousie and Restigouche.....	12	Shediac.....	11
Digdequash.. . . .	5	"    north of island, 26 bushes and.....	2
Dipper harbour. . . . .	3	Shippigan.....	19
Dorchester.....	3	St. Andrews.....	14
Grande anse . . . . .	4	St. Croix ledge. . . . .	11
Grand lake and Salmon river.....	73	St. John river, 155 stakes and.....	68
Grand Manan, 1 spindle and . . . . .	28	St. Louis, 10 bushes and.....	10
Great Shemogue.....	7	South Tracadie gully, 30 bushes and.....	5
Harvey.....	7	Tabusintac . . . . .	18
Kouchibougnac and Black river, bushes.....		Tracadie.....	19
Lepreau . . . . .	3	Tynemouth creek.....	3
Letite and Back bay, 1 spindle and.....	14	Washademoak, 144 bushes and.....	2
Little Shemogue, 1 beacon and . . . . .	5	Waweig river . . . . .	1
Little Shippigan . . . . .	12	West Isles, 4 spindles and.....	23
Magaguadavic . . . . .	13	Maintained by agency . . . . .(signal-buoys).	18
Maquapit and French lakes, 20 stakes and... .	4	"    "    (can and conical-buoys).	16

PRINCE EDWARD ISLAND.

Bay Fortune.....	3	Little channel.....	3
Beach point.....	3	Montague.....	6
Bedeque.....	11	Murray harbour.....	33
Brae harbour.....	5	New London. . . . .	9
Cardigan, Lower.....	6	Orwell and Vernon river, 36 bushes.....	6
"    Upper . . . . .	12	Pinette.....	5
Cascumpec, 12 stakes.....	14	Port Hill . . . . .	12
Charlottetown, 20 stakes.....	22	Pownal.....	7
Cove Head.....	2	Rollo bay . . . . .	3
Crapaud, stakes and.....	5	Rustico.....	5
East river (Hillsboro') . . . . .	17	Savage harbour.....	2
Egmont bay.....	12	Souris . . . . .	4
"    south, 8 stakes and.....	2	St. Peters harbour.....	8
Georgetown . . . . .	13	Summerside . . . . .	11
Goose harbour.. . . .	2	Tracadie.....	3
Grand river, 1 beacon and . . . . .	12	West point.....	1
"    lot 14.....	8	Wood island.....	4
Indian rocks.....	1	Maintained by agency . . . . .(signal-buoys).	3
Malpeque.....	16	"    "    .....(can and conical).	5
Miminegash.. . . .	6		

BRITISH COLUMBIA.

Alford reef, can.....	1	Dall patch, cage.. . . .	1
Benmohr rock, cage.....	1	Darcy shoal, can.....	1
Browning passage, spar. . . . .	1	Departure bay, cage.....	2
Burnaby reef, spar.....	1	Dorcas rock, spar . . . . .	1
Canoe pass, Fraser river, spar.....	8	Entrance point, conical.....	1
Celia reef, conical.... .	1	Esquimalt harbour, cage.....	2
Clayoquet, can. ....	1	First narrows, B.I., spar.....	1
"    platform . . . . .	2	False narrows, spar. . . . .	2
Clark rock, platform . . . . .	1	False reef, can.....	1
Colburne passage, cage.....	2	Fraser river, conical.....	14
Cortez island, can . . . . .	1	"    spar . . . . .	2



## SESSIONAL PAPER No. 21

List of Buoys maintained by the Department of Marine and Fisheries. &c.—*Continued.*BRITISH COLUMBIA—*Continued.*

	No. of buoys.		No. of buoys.
Ganges harbour, can.	1	Portier pass, can with cage	1
Gossip reef, can	1	Reef point, conical	2
Governor rock, cage	1	Rosedale reef, can	1
Grappler reef, can	1	Rosenfelt reef, conical	1
Hazel point, spar	1	Sand heads, conical	12
Hodgson reef, can	1	bell	1
Horda rock, can	1	Sidney spit E., conical	1
Hornby rock, spar	1	"    "    W., can	1
Horsewell reef, can	1	"    reef, spar	2
Indian reef, can	1	"    rock, platform	1
Johnson reef, can	1	Sparrowhawk rock, cage	1
Kelp bar, spar	2	Tugwell reef, spar	1
bell	1	Ucluelet, cage	1
Ledge point, spar	1	Victoria harbour, cage	2
Lighthouse island, conical	1	"    rock, can	1
Malaspina strait, cage	2	Village point, spar	1
Mears spit, cage	1	Virago rock, spar	1
Metlactlah, cage	2	Welcome point, spar	1
Nanaimo harbour, cage	9	Whale rock, spar	1
"    spar	2	White rock, can	1
Paterson rock, cage	1	Kootenay lake, platform	12
Point Grey, can with cage	1		

## BEACONS.

	No. of beacons.		No. of beacons.
Atkins reef	1	Mud bay, Serpentine and Nicomeek'l.	40
Base flat	1	Nanaimo harbour	8
Brochy ledge	1	North reef	1
Canoe rock	1	Oyster harbour	2
Danger reef	1	Panther shoal	2
Dyke point	1	Regatta rock	1
Enterprise reef	1	Romulus rock	4
False narrows	2	Sand heads, lighthouse beacon	1
First narrows, Burrard Inlet	2	Shark spit	1
"    marking water pipe line	2	Shrub	1
Gabriola reef	1	Shute reef	1
Gibson landing	1	Sidney spit	1
Goose spit	1	Union spit	1
Grassy point	1	Victoria harbour	2
Kelp reef	1	Walker rock	1
Lewis rock	1	White islet	1
Maple spit	1	White point	1
Moresby rock	1	Zero rock	1







APPENDIX No. 1.

GENERAL SUMMARY of Expenditure for Fiscal Year, 1902-3.

Service.	Amount.	Total.
	\$ cts.	\$ cts.
Ocean and River--		
Maintenance and repairs to Dominion steamers.....	279,348 06	
Balance contract for steamer to replace <i>Newfield</i> .....	90,465 91	
Examination of Masters and Mates..	4,968 36	
Rewards for saving life, &c.....	9,306 25	
Investigations into wrecks..	1,367 45	
Registry of Canadian shipping.....	417 25	
Removal of obstructions in navigable rivers. ....	682 98	
Tidal service .....	14,520 00	
Winter mail service.....	6,211 28	
Marine biological station.....	2,000 00	
Export cattle trade.....	3,026 25	
Montreal pilotage commission..	1,745 23	
Montreal dry dock.....	3,528 25	
Unforeseen expenses.....	4,822 78	
		422,410 05
Lighthouse and Coast—		
Salaries and allowance of lightkeepers.....	222,499 38	
Agencies, rents and contingencies .....	16,566 14	
Maintenance and repairs to lighthouses.....	304,785 39	
Construction of lights and aids to navigation.....	319,496 33	
"    Lurcher shoal .....	79,991 40	
Salaries of temporary officers.....	6,945 96	
Signal service.....	6,863 75	
Repairs to wharfs. ....	1,721 91	
		958,870 26
Scientific Institutions, Surveys, &c.—		
Meteorological service. ....	82,554 01	
Magnetic observatory.....	2,723 80	
Hydrographic survey..	35,243 97	
Observatory, St. John, N. B.....	1,015 19	
"    Sulphur Mountain.....	3,167 62	
Time ball, Halifax, N.S.....	1,000 00	
		125,704 59
Marine Hospitals--		
Care of sick seamen in marine hospitals in Maritime Provinces and repairs.	48,151 48	
Shipwrecked and distressed seamen..	598 67	
		48,750 15
Steamboat Inspection .....		30,172 09
Capt. A. M. MacGregor, gratuity.....		1,050 00
Parliamentary returns .....		95 16
Carried forward.....		1,587,052 24



GENERAL SUMMARY of Expenditure for Fiscal Year ended June 30, 1903—*Concluded.*

Service.	Amount.	Total.
	\$ cts.	\$ cts.
Brought forward total Marine.....	.....	1,587,052 24
FISHERIES.		
Salaries and disbursements of fishery overseers, &c.....	114,719 00	
Building and maintenance of fishbreeding establishments.....	77,330 86	
Fisheries protection service.....	115,667 99	
Building fishways, &c....	938 69	
Legal and incidental expenses.....	1,998 95	
Canadian fishery exhibit.....	2,817 20	
Distributing fishing bounty.....	4,900 11	
Oyster culture .....	3,712 16	
Cold storage.....	11,331 49	
Georgian Bay biological laboratory.....	1,495 95	
Balance building vessels in B. C.....	23,695 00	
Two patrol boats.....	5,775 00	
Wharf and storage at Sapperton. ....	3,000 00	
Seizures by Russian cruisers.....	87 50	
Licenses of U. S. vessels.....	505 72	
Revenue.....	115 50	
Fishing bounty.....	159,853 50	
		527,944 62
Civil government—salaries, including Minister.....	73,042 53	
" " contingencies.....	11,460 00	
		84,442 53
Total Marine and Fisheries. ....	.....	2,199,439 39

F. GOURDEAU,  
*Deputg Minister of Marine and Fisheries.*

A. W. OWEN,  
Accountant.



SESSIONAL PAPER No. 21

## APPENDIX No. 2.

STATEMENT of Revenue of Marine and Fisheries Department for Fiscal Year ended  
June 30, 1903.

Service.	Refunds.		Amount.
	\$ cts.	\$ cts.	\$ cts.
Harbour, piers and wharfs . . . . .			12,557 50
Dominion steamers . . . . .			15,478 10
Winter mail service . . . . .			608 25
Examinations, masters and mates . . . . .			5,790 50
Fines and forfeitures . . . . .	1,120 50	225 00	895 50
Steamboat inspection fund . . . . .	27,821 09	8 00	27,813 09
"    engineers' certificates . . . . .			935 00
"    inspection of barges . . . . .			140 00
Sick mariners' fund . . . . .	65,005 15	153 60	64,851 55
Marine registry searches . . . . .			59 17
Signal station service . . . . .			2,873 66
Shipping forms . . . . .			
Casual revenue, sundries . . . . .	7,934 30	59 90	7,874 40
			<u>\$139,876 72</u>
FISHERIES.			
Ontario . . . . .			1,808 83
Quebec . . . . .			4,379 15
Nova Scotia . . . . .			3,962 45
New Brunswick . . . . .	11,188 02	1 50	11,186 52
Prince Edward Island . . . . .			2,007 35
Manitoba . . . . .			1,636 00
North-west Territories . . . . .	1,498 50	78 00	1,420 50
British Columbia . . . . .	43,015 62	36 00	42,979 62
Yukon Territory . . . . .			320 00
Hudson Bay . . . . .			10 00
			<u>69,710 42</u>
Licenses to United States fishing vessels . . . . .	9,057 40	132 00	8,925 40
			<u>\$78,365 82</u>

## RECAPITULATION.

Marine revenue . . . . .	\$139,876 72
Fisheries revenue . . . . .	78,635 82
	<u>\$218,512 54</u>

F. GOURDEAU,  
*Deputy Minister of Marine and Fisheries.*

A. W. OWEN,  
*Accountant.*



APPENDIX No. 3.

STATEMENT of Steamboat Inspection Dues collected during the Fiscal Year ended June 30, 1903.

Ontario.		\$	cts.	Nova Scotia.		\$	cts.
Amherstburg		39	48	Amherst		12	40
Belleville				Annapolis			
Brockville		46	88	Arichat			
Chatham		81	36	Baddeck			
Collingwood		819	12	Barrington		5	96
Cornwall		75	16	Canso		18	76
Deseronto		170	68	Digby		5	32
Fort Erie				Halifax		3,079	24
Fort William		16	40	Kentville		349	08
Goderich		333	51	Liverpool		40	32
Hamilton		256	32	Lockeport			
Kingston		1,150	04	Lunenburg		20	52
Lindsay		242	76	New Glasgow			
Midland		348	04	North Sydney		199	12
Morrisburg		75	41	Parrsboro'		15	60
Napanee		5	80	Pictou			
Niagara Falls		15	60	Port Hawkesbury		54	28
Ottawa		605	68	Sydney		112	72
Owen Sound		1,148	36	Windsor		32	04
Parry Sound		378	16	Yarmouth		109	04
Peterboro'		180	00				
Pictou		150	12			4,054	40
Port Arthur		228	00	Manitoba.			
Prescott		200	52	Brandon		11	84
Rat Portage		60	28	Winnipeg		130	36
St. Catharines		276	16				
St. Thomas		340	04			142	20
Sarnia		676	84	British Columbia.			
Sault Ste. Marie		745	68	Kaslo		210	16
Simcoe		28	72	Nanaimo		8	52
Stratford		21	00	Nelson		692	72
Toronto		1,529	48	New Westminster		400	80
Trenton		6	60	Vancouver		935	84
Wallaceburg		56	32	Victoria		3,697	68
Windsor		1,573	33				
		11,881	85			5,945	72
Quebec.				Prince Edward Island.			
Cookshire		24	56	Charlottetown		317	56
Montreal		624	44	Summerside			
Quebec		1,201	36			317	56
St. Johns				North-west Territories.			
Sorel		16	68	Calgary		11	40
Stanstead		62	04	Dawson		689	24
Three Rivers				White Horse		1,051	00
New Brunswick.						1,751	64
Bathurst		20	64	Total		27,821	09
Campbellton		46	40	LESS refunds		8	00
Chatham		46	84				
Dalhousie		31	12			27,813	09
Fredericton		11	20	Inspection tow barges		140	00
Moncton		6	60	Fees for engineers' certificates		935	00
Newcastle		6	44				
Sackville		7	00				
St. John		1,554	92	Grand total		28,888	09
St. Stephen		67	48				
		1,798	64				



## APPENDIX No. 4.

### INVESTIGATION INTO WRECKS IN THE ST. LAWRENCE RIVER AND GULF.

To the Deputy Minister  
of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit my report upon the principal casualties that occurred during the season of navigation, in the River and Gulf of St. Lawrence.

Formal investigations were held into accidents to the following vessels :—

SS. *Carrijaan Head*.  
SS. *Iberian*.  
SS. *Protector*.  
SS. *Stord*.  
Barque *Sardhana*.

Steam tug *Mersey*.  
SS. *Manchester Trader*.  
SS. *Dominion*.  
SS. *Dominion*.  
SS. *Bergenhus*.

On account of the witnesses not being available the under-mentioned casualties were not investigated :—

SS. *Norwegian*.  
SS. *Loughrig Holme*.  
SS. *Homelea*.  
SS. *Hibernian*.  
SS. *Lake Manitoba*.

SS. *Mount Royal*.  
SS. *Pomeranian*.  
Ship *Alacrite*.  
SS. *Topaze*.

Owing to the fact that in almost every case, the department is compelled to rely upon the press for information with regard to shipping casualties, it not infrequently occurs that accidents to vessels do not become known in sufficient time to permit of an investigation being held. If ship-owners and agents understood how anxious the department is to improve aids to navigation, and punish carelessness on the part of shipmasters or pilots, I think they would render more assistance in this respect.

The list for the season is a heavy one, and will, I fear, tend to maintain the high rates of marine insurance at present in operation on Gulf and River St. Lawrence shipping.



The following table shows the particulars of the casualties investigated :—

Name of Vessel.	Sail or Steam.	Net Registered Tonnage.	Port of Registry.	Date of Casualty.	Place of Casualty.	Damage Sustained.	Result of Investigation.
Carrigan Head.....	S.S.....	2,717	Belfast.....	April 24 .....	River St. Lawrence, between Montreal and Quebec.....	Slight .....	Buoys out of position.
Urbian .....	S.S.....	3,347	Liverpool.....	June 6.....	River St. Lawrence, between Montreal and Quebec.....	Slight .....	Atmosphere smoky; pilot to blame.
Protector.....	S.S.....	1,678	Drammen, Norway.....	June 4.....	Saguenay River.....	Total loss .....	Pilot to blame, suspended for 18 months.
Stord .....	S.S.....	372	Londres, France.....	June 10.....	Ste. Anne des Monts.....	Badly damaged.....	Dense fog; master censured.
Sardhana .....	Barque.....	1,119	Glasgow.....	July 19.....	Point des Monts .....	Badly damaged.....	Dense fog; master censured.
Mersey.....	Tug.....	34	Quebec.....	Aug. 12.....	Point Outaouais .....	Total loss.....	Foundered in deep water through springing a leak; master's, mate's and engineer's certificates cancelled.
Manchester Trader.....	S.S.....	2,136	Manchester .....	Aug. 10.....	South Point, Anticosti .....	Badly damaged.....	Master's certificate suspended for 6 months.
Dominion.....	S.S.....	2,581	London.....	June 7.....	River St. Lawrence, between Montreal and Quebec.....	No damage.....	Struck some obstruction in the ship channel. Probably a sunken log.
Dominion.....	S.S.....	2,581	London.....	July 13 .....	Bird Rocks.....	Badly damaged.....	Dense fog; inefficient fog signal.
Bergenhus.....	S.S.....	2,344	Bergenhus, Norway.....	Sept. 24.....	St. Charles River, Quebec.....	Slight damage.....	Pilot to blame; branch cancelled.
Hektos.....	S.S.....		Russian and Swedish vessels.....	Nov. 3.....	River St. Lawrence, between Montreal and Quebec.....	Badly damaged.....	In collision and afterwards stranded. Pilot on Hektos to blame; branch suspended for 6 months.
Drottning Sophia.....	S.S.....						

#### PRINCIPAL CASUALTY LIST NOT INVESTIGATED.

Loughbrig Holme.....	S.S.....	1,317	Maryport .....	June 10.....	Matane.....	Slight damage.....
Holmlea .....	S.S.....	1,143	Hartlepool.....	Aug. 7.....	Pt. Rich, Nfld.....	Slight damage.....
Hibernian .....	S.S.....	4,106	Liverpool.....	Oct. 1.....	Longueuil Bay .....	Slight damage.....
Lake Manitoba .....	S.S.....	5,705	Liverpool.....	Sept. 30.....	Montreal .....	Slight damage.....
Mount Royal.....	S.S.....	4,599	Liverpool.....	Oct. 10.....	River St. Lawrence, between Quebec and Montreal.....	Damaged.....
Pomeranian.....	S.S.....	2,700	Glasgow .....	July 29.....	Montreal.....	Slight damage.....
Alacrite .....	Ship.....	1,823	Christiana, Sweden.....	Sept. 29.....	Cap Chatte.....	Slight damage.....
Norwegian.....	S.S.....	2,303	Glasgow.....	June 13.....	Little Codroy River, Nfld.....	Slight damage.....
Topaze .....	S.S.....	1,211	London.....	Sept. 18.....	Port au Basque, Nfld.....	Total loss.....



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Of the ten casualties investigated, the masters were responsible for four, pilots for three, and three may be classified as due to the perils of navigation.

The casualty to the ss. *Homelea* was investigated by the Imperial Board of Trade, and the master's certificate suspended for three months. The loss of the ss. *Topaze* will also be investigated in England.

In a recent return of the casualties which occurred in the River and Gulf of St. Lawrence during the season April to November, 1903, issued by the Liverpool Underwriters Association, the ss. *Monterey* is included. This vessel was wrecked at Plate Point, St. Pierre-Miquelon, and the master's certificate suspended for six months by the Imperial Board of Trade.

The total value of the trade via the St. Lawrence for the fiscal year ending June 30, 1903, was \$132,019,550. In 1902, it was \$113,414,381; in 1901, \$111,500,341, and in 1900, \$97,948,377; with the trade increasing so enormously, a greater number of casualties is only to be expected.

The prevalence of fog in the Gulf and River St. Lawrence, and the variability of the currents, both as regards strength and direction, account for nearly every casualty, but I am of the opinion that these conditions can be easily overcome by ordinary care and the usual precautions adopted by practical seamen and pilots.

The ss. *Lake Champlain* struck some obstacle in the harbour of St. John, N.B., on January 28, 1903, sustaining slight damage; a thorough search of the spot by the pilot in charge of that vessel brought nothing to light which could account for the accident, and it is to be presumed that she came in contact with a sunken log or piece of cribwork.

On June 11, the ss. *Halifax* stranded on Point Pleasant shoals, Halifax harbour, but sustained no damage; the master was censured.

With the object of facilitating the holding of investigations the 'Shipping Casualties Act' was amended in October. The most important changes being as follows:—

(1) The Minister may appoint a Commissioner to hold formal investigations, in place of the necessity for a separate commission being issued for each casualty as required before.

(2) A 'Statement of the Case' need not be issued—as heretofore—before the commencement of the proceedings where a certificate is to be dealt with; the defendant's certificate may be cancelled or suspended after he has been furnished with a copy of the report or statement of the case, and had an opportunity of making a defence.

(3) An investigation may be held into the stranding of any vessel, whether damaged or not.

The Honourable the Minister of Marine and Fisheries has appointed Captains Archibald Reid and John Temple to be assessors for a term of three years, at the ports of Montreal and Quebec respectively; and—in pursuance of Section 8 of the amended 'Shipping Casualties Act'—he has appointed me a commissioner to hold investigations into shipping casualties.

A full statement of wrecks and casualties that have occurred during the twelve months ended June 30, 1903, in Canadian waters and to Canadian sea-going vessels in other waters will appear in Appendix No. 48 of the supplement to this report.

I have the honour to be, sir,  
Your obedient servant,

R. SALMON,  
Wreck Commissioner.

OTTAWA, December 31, 1903.



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The findings of the court upon the casualties investigated are as follows :—

‘ CARRIGAN HEAD ’ (SS.)

This British steamship grounded opposite No. 3 lightship, Lake St. Peter, River St. Lawrence, on April 24, 1903. A formal investigation was held into the casualty at the harbour commissioners’ office, Montreal, and the finding of the court was as follows :—

That the captain was not to blame for the disaster. That the officer of the watch was not to blame for the disaster. That the quartermaster carried out the orders of the pilot. That pilot Angers was not to blame. That the casualty was due to the buoys being out of place.

The court has decided that Mr. Boucher is not to blame for this, as, from the evidence produced, the buoys were placed in their proper positions in the first instance, but in some unforeseen way they had dragged therefrom.

The light-keeper of No. 3 lightship having noticed that these buoys were out of position for some time previously, should have reported the fact.

Pilot Prudent Belleisle, who was in charge of the *Fridtjof Nansen*, on April 22, which it is presumed touched the ground at or about the same locality on that date, should have reported the matter immediately on his arrival in Montreal, in which case the court considers that Mr. Boucher would have been able to attend at once and see whether the buoys were in their proper positions or not.

The court strongly recommends that a steam launch should be procured and used for patrolling up and down the river three or four times a week to see that the buoys are in their proper positions.

Dated June 5, 1903.

O. G. V. SPAIN,  
*Commissioner.*

We concur in the above report,

R. SALMON, }  
L. ST. LOUIS, } Assessors.

‘ IBERIAN ’ (SS.)

This British steamship grounded on the south side of the channel, near Isle aux Raisins, River St. Lawrence, on June 6, 1903, and at a formal investigation into the causes which led to the casualty, held at the harbour commissioner’s office, Montreal, the court found :—

That nothing in the ship or her equipment contributed toward the accident.

That the conditions of the weather prevailing at the time of the casualty were favourable, but navigation was rendered difficult, though not unsafe, by smoke from bush fires, which limited the distance the buoys were visible to about half a mile.

That proper precautions were taken with regard to speed, the ship steaming about four (4) knots per hour; and a good look-out was kept, the captain, 1st and 3rd officers being on the bridge as well as the pilot.

That no blame is attached to the master or officers for the casualty.

The buoys were apparently in their proper position.

That the casualty was due to Pilot O. Naud in attempting to pick up the buoy which marked the south side of the channel—starboarding his helm to avoid a bateau, which he supposed was on the north side of the channel, whereas it was on the south side, and obscuring from view the buoy he was looking for. Owing to this error of judgment the ship ran out of the channel and grounded before it was possible for the pilot to see his mistake.

The court is of the opinion, that the pilot, having proceeded about half the distance between the buoys without seeing the spar buoy he was looking for, should have anchored.

The court wishes to draw attention to the fact that Pilot Naud has had thirty-three (33) years’ experience as a pilot, with a clean record, having taken over eleven hundred (1,100) ships up or down the river, and he is the senior pilot on the route.



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The court is of the opinion that pilots should have a better knowledge of the compass and charts and steer by compass when the buoys are so far apart as to be invisible one from the other, instead of trusting entirely to shore marks, which in the present instance were ill-defined.

Had Pilot Naud steered by compass this casualty would have been averted.

Mr. Meredith's suggestion that the harbour commissioners' charts should be corrected to date and rendered accessible to ship captains and pilots is a good one, though having no bearing on the present case, and the court will take steps to bring it to the notice of the authorities.

R. S. CLIFT,  
JOHN TEMPLE,  
Assessor.

(Signed) R. SALMON,  
Commissioner.

At QUEBEC, P.Q., June 15, 1903.

' PROTECTOR ' (SS.)

This Norwegian steamship stranded at the mouth of the Saguenay river, on June 4, 1903, subsequently becoming a total loss. At a formal investigation into the case, held at the harbour commissioners' office, Quebec, the court found :—

That the ship was properly equipped and in a good and sea-worthy condition when she left Chicoutimi.

That she was supplied with proper and sufficient charts and sailing directions.

That the reef on which she stranded was properly marked on the Admiralty charts.

That the entrance to the Saguenay river is properly and sufficiently buoyed for the purposes of navigation.

That some blame attaches to the master for the stranding of the ship, in that he took no steps to ascertain whether the pilot was steering a proper course, in waters that any practical seaman could have navigated without the assistance of a pilot : the channel being perfectly straight, and at no part less than six (6) cables wide.

That the master committed a grave error of judgment in taking no steps towards saving his vessel after stranding by jettisoning cargo from Nos. 1 and 2 holds and the deck cargo forward whereby the strain on the vessel would have been minimized, and the salvors enabled to place and work their pumps on arrival. The court is of the opinion that had these steps been taken the vessel would have been floated, and saved.

That the casualty was caused by the wrongful act of Pilot Nazaire Delisle in steering an improper course, the evidence going to show that he had never piloted a vessel out of the Saguenay river before, and that his knowledge of this river was so limited as to be dangerous.

In the opinion of the court, the sentence of the harbour commissioners that Pilot Delisle be suspended for eighteen (18) months, does not meet with the requirements of the case ; this man will return to his work at the expiration of that sentence more incompetent than now, since he will be out of touch with his work for that time. Any shipmaster who caused the stranding and loss of a vessel valued—with her freight and cargo—at upwards of \$250,000 under such conditions of gross neglect, would be dealt with much more severely.

The court desires to add that the system of employing St. Lawrence pilots on the Saguenay river, with the imperfect training which the evidence showed they receive, is one that needs revision, and the authorities responsible must realize that until pilots serve an approved apprenticeship and pass higher examinations than the present standard requires, these accidents will continue to happen.

R. SALMON,  
Commissioner.

Assessors : { R. S. CLIFT,  
Marine Surveyer and Master Mariner.  
J. TEMPLE.

At Quebec, P.Q., June 22, 1903.



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## ' STORD ' (SS.)

This British steamship stranded at Ste. Anne des Monts, Gulf of St. Lawrence, on June 10, 1903. The causes which led to this casualty were the subject of a formal investigation, held at the harbour commissioners' office, Quebec, and the finding of the court was :—

That the ship was properly equipped, and in a good and sea-worthy condition, when she left St. John's, Newfoundland.

That she was not properly and sufficiently equipped with charts, in that there was only a general chart of the Gulf and River St. Lawrence (No. 1271) on board : but that the sailing directions on board were sufficient.

That the coast, in the vicinity of the place where the vessel stranded, is properly and sufficiently buoyed and marked for the purposes of navigation.

That blame attaches to the master for the stranding of the ship, in that he was attempting to navigate his vessel in close proximity to the land with a general chart : and in that he omitted to study his sailing directions sufficiently to inform himself of the set of the currents in those waters.

That the vessel was not proceeding at a safe rate of speed considering the distance from the land and conditions of the weather.

That the master used every possible means to save his vessel after stranding.

The court considers that the master committed an error of judgment in attempting to navigate his vessel with a small scale chart, and that he deserves censure for his insufficient study of the sailing directions, and for proceeding at an unsafe speed, but refrains from dealing with his certificate in view of the fact that he was almost constantly on deck from St. John's, Newfoundland, to the place of the stranding, during trying circumstances when it is necessary to display the greatest caution and judgment : also owing to his past clean record.

In evidence taken on the fog-signals along the coast between Cape Magdalen and Matane, suggestions were made for improvements, which the court will take steps to bring before the notice of the authorities at an early date.

QUEBEC, P.Q., June 22, 1903.

R. SALMON,  
*Commissioner.*

We concur in the above report,

R. S. CLIFT, }  
JOHN TEMPLE, } Assessors.

## BARQUE 'SARDHANA.'

This British barque was stranded at Point des Monts, Gulf of St. Lawrence, on July 19, 1903, and the causes which led thereto were formally investigated at the City Hall, Quebec, the finding of the court being :—

That the ship was in a good and sea-worthy condition when she sailed from the port of Baltimore.

That having regard to the state of the weather, proper precautions were taken with respect to the lead, look out, and fog signals.

That proper and sufficient charts were provided for the navigation of the Gulf of St. Lawrence, and the sailing directions the best obtainable.

That after the stranding every effort was made to keep the water under and save the vessel.

That the aids to navigation—in so far as the fog signal at Point des Monts is concerned—were inefficient : the evidence of various witnesses going to show that it was impossible to hear the fog-signal, even after the vessel stranded, within a mile and a-half of the lighthouse.

That the casualty was due to the application by the master of a correction to his course for a supposed south-easterly set of current, whereas, owing to prevailing easterly winds, the current appears to have set in the opposite direction.



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The court severely reprimands the master for attempting to pick up the fog signal at Point des Monts in a dense fog, after being assured of the bearing and approximate distance of Cape Chatte, and there being nothing to prevent his steering a straight course up the middle of the gulf for the distance of about eighty (80) miles.

The court further censures the master and chief officer for adopting a most irregular proceeding of only logging the mean of their courses, and keeping no detailed record of the courses and distances run, so that it was impossible to check their positions by the courses entered in the log book.

(Sgd.) R. SALMON,  
Commissioner.

We concur :

(Sgd.) J. TEMPLE,  
Master Mariner. } Assessors:  
F. X. LAMARRE.

QUEBEC, August 11, 1903.

THE STEAM TUG 'MERSEY.'

This steam tug foundered near Pointe Outarde, River St. Lawrence, on August 12, 1903, five lives being lost. A formal investigation was held into the case at the Admiralty Court, Quebec, and the finding of the court was as follows :—

(1) That the *Mersey* was in a sea-worthy condition—so far as the evidence adduced went to show—when she left Quebec.

(2) That the boat supplied to her was sufficient, had the master used the material at his disposal to increase its buoyancy, to have saved all the souls on board.

(3) That the evidence was insufficient to prove what caused the casualty whereby loss of life ensued.

(4) That the master made no effort to stop the leak and save the vessel.

(5) In the opinion of the court, the vessel might have been kept afloat for an indefinite time, if proper steps had been taken.

(6) That the vessel was prematurely abandoned by the only experienced men on board.

(7) That Gagnon, the master, was guilty of a brutal and inhuman crime in seizing the only boat and deserting his vessel, leaving to drown five landsmen who were helpless to save themselves.

(8) That Barras, the mate, was guilty of an act of disgraceful cowardice in being a party to the desertion.

(9) That Lamothe, the engineer, was guilty of being accessory to the desertion, but—in the opinion of the court—less to blame than his accomplices, owing to his age and infirmities.

(10) The court cancels the certificate of Gagnon, the master.

(11) Owing to the fact that a 'statement of the case' was not furnished to Barras, the mate, before the commencement of the proceedings, the court is unable to deal with his certificate, but will recommend the Honourable the Minister of Marine and Fisheries to deal with it summarily, under section 20, of chapter 35, of the Statutes of 1901, being 'An Act respecting Inquiries and Investigations into Shipping Casualties.'

(12) The following are the names of the missing men :—Thomas Bissonnette, Eugene Grenier, Joseph Barette ; Emmanuel Gagnon, Joseph Martel, bodies recovered.

The court desires to express its sympathy with the relatives of the missing men.

(Signed) R. SALMON,  
Commissioner.

We concur,

(Signed) J. TEMPLE, Master Mariner, } Assessors.  
F. X. LAMARRE, Pilot, }

QUEBEC, P.Q., August 29, 1903.



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## 'HALIFAX' (SS.)

This British steamship stranded on Point Pleasant Shoals, Halifax harbour, on June 11, 1903. A formal investigation was held into the case, the court finding :—

That the steamship *Halifax* of the port of Halifax, Nova Scotia, left Hawkesbury, Cape Breton, for Halifax and Boston on June 10, 1903, with a crew of fifty hands all told; fifty-five (55) passengers and about five hundred (500) tons of general cargo. Her draught of water at the time of leaving port being 13' 6" forward and 16' 6" aft.

That at 8.15 a.m., on Thursday, June 11, the weather being very thick and wind blowing lightly from the south, southeast, steering a northerly course and sea smooth, the ship going dead slow, lead going continuously, she grounded off Point Pleasant on the western side of Halifax harbour.

That a portion of her cargo being removed, the ship came off at next high tide under her own steam without any other assistance. She was examined by divers, and then placed in dry dock, where further examination was made, but no damage was found to have been sustained.

The *Halifax* was commanded by Captain Ellis, who holds a Canadian coasting master's certificate, and also acts as pilot for the ship.

From Port Hawkesbury until she picked up the automatic buoy at the entrance to Halifax harbour, no land of any sort was seen.

The vessel was well found in all necessary charts and aids to navigation.

The captain was an experienced navigator on this coast, and although some evidence was adduced that there was probably some local attraction at this place caused by the military electric works in the vicinity, the court is of the opinion that this had no bearing on the casualty, considering that the *Orinoco* passed in within a few minutes of the *Halifax*: and also taking into consideration the evidence of the pilot of the *Orinoco*, who distinctly states that his compasses were not affected in any way on that day.

The court is of the opinion that this casualty was caused by the master neglecting to make sufficient allowance for a strong westerly current which existed at the time, and which is usually encountered after heavy easterly weather.

In view, however, of the master's previous excellent record, and the fact, that, during the whole voyage from Port Hawkesbury to Halifax, the ship was more or less enveloped in dense fog, and that every precaution in the way of log, lead and lookout, had been closely observed, the court finds no cause for dealing with his certificate, but considers that the master, Alfred Ellis, is deserving of censure for neglecting to steer a more westerly course, and he is hereby censured accordingly, and admonished to be more careful in future.

The court also finds that the other officers of the ship were not in any way to blame for the casualty.

	(Signed)	O. G. V. SPAIN,
		Commissioner.
(Sgd) S. R. HILL, )		
" A. KENNEDY, )	Assessors.	

## 'MANCHESTER TRADER' (SS.)

This British steamship was stranded near South point, Anticosti, Gulf of St Lawrence, on August 10, 1903. A formal investigation was held into the case, the court sitting at the Admiralty Court, Quebec. The finding was as follows :—

1. That the *Manchester Trader* was properly equipped and in good, sea-worthy condition when she left Montreal.

2. That she had proper and sufficient charts and sailing directions for the navigation of the Gulf of St. Lawrence.

3. That the coast in the vicinity of the place where the vessel stranded is properly charted for the purposes of navigation.

4. That the course set at 9 o'clock p.m. on August 9, to pass about six (6) miles to the southward of South point, Anticosti, was a safe and proper one, but the master



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should have recognized on sighting Southwest point light that he was a number of miles to the northward of his course, and should have altered his course materially.

Again, at 6:22 o'clock a.m. on August 10, on sighting South point lighthouse almost ahead, the master had a second indication that he was considerably to the northward of his course, and had he acted with any judgment the stranding would never have occurred.

5. That the vessel stranded about 6:45 o'clock a.m. on August 10, near South point, Anticosti, through the wrongful act of the master, Michael Swords, steering improper courses after receiving two convincing proofs that he was very much out of his reckoning.

6. That the master did not take proper and sufficient means to save his vessel after the stranding.

7. The court suspends the certificate, numbered 025282, of the master, Michael Swords, for a period of six (6) months from the date hereof, but recommends that he be granted a certificate as first mate during the period of his suspension as master.

(Signed) R. SALMON,  
Commissioner.

We concur.

(Signed) J. TEMPLE, Master Mariner. } Assessors.  
HY. ROUS, Master.

QUEBEC, P.Q., August 29, 1903.

‘ DOMINION ’ (ss.)

This British steamship, on June 7, 1903, touched some obstruction in the ship channel, while passing buoy ‘ Q 107 ’, off Liveur point, river St. Lawrence. The mishap was the subject of a formal investigation at the harbour commissioners’ office, Montreal, and the finding of the court was :

(1) That the ss. *Dominion* was properly equipped and in a good and sea-worthy condition, when she left Sydney, Cape Breton,

(2) That proper precautions were taken with regard to speed, and a good look-out was kept.

(3) That the conditions of weather prevailing at the time were not unfavourable, but navigation was occasionally rendered difficult by the smoke from bush fires.

(4) The court is unable to determine—from the evidence adduced—the nature of the obstruction which the vessel came in contact with, or that any damage resulted therefrom ; and it is evident that the said obstruction did not exist in that part of the channel extending from Cap Levrant curve to Cap à la Roche after July 2, since nothing could be found when the channel was swept by the Department of Public Works, between June 29 and July 2.

(5) That no blame attaches to the pilot, master, or officers of the *Dominion*, it being evident that the vessel was in or near the centre of the channel.

(6) The court is of the opinion that a red buoy placed on the north side of the channel, abreast of the black buoy Q. 107, would be of great advantage in enabling pilots and masters to determine the width of the channel at this point.

We concur. (Sgd.) ARCHIBALD REID,  
Port Warden and Surveyor  
to Lloyd’s Register. } Assessors.  
(Sgd.) J. TEMPLE,  
Master Mariner. }  
(Sgd.) R. SALMON,  
Commissioner.

MONTREAL, P.Q., September 15, 1903.



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## 'DOMINION' (ss.)

This British steamship, while proceeding from Montreal to Sydney, Nova Scotia, on July 13, 1903, touched bottom at Bird Rocks, Gulf of St. Lawrence, so heavily as to cause material damage. A formal investigation was held into the case at the harbour commissioners' office, Montreal, and the court found:—

(1) That the ss. *Dominion* was properly equipped, and in good and sea-worthy condition, when she left Montreal.

(2) That the vessel was provided with sufficient charts and sailing directions for the navigation of the River and Gulf of St. Lawrence.

(3) That the courses steered after taking a departure from Cape Magdalen were rather fine for the conditions of the weather prevailing at the time, but, in accordance with the master's previous usage, and in view of the fact that he had great experience in these waters, the court considers that the master was justified in setting those courses.

(4) That the sparsity of the soundings in the vicinity of the Bird Rocks tended to mislead the master into the belief that his vessel was to the northward of her actual position.

(5.) That the fog signal on board Bird Rocks, as sounded at present, at intervals of fifteen (15) minutes, is—in the opinion of the court—quite useless as an efficient aid to navigation.

(6.) That the vessel touched some outlying rock to the northward of the Bird Rocks about 8.15 o'clock a.m., on July 13, and that the damage resulting therefrom amounted to \$36,800, and thirty-eight (38) days' detention in dock.

(7.) That the casualty was mainly due to the inefficiency of the fog signal, but some blame attaches to the master for maintaining an injudicious speed after obtaining a sounding of twenty-seven (27) fathoms at 7.30 o'clock, a.m.

(8.) That the court—in consideration of the master's previous record—abstains from censuring him, but cautions him to exercise greater care in his future navigation of waters where the soundings are as sparse and irregular as shown on the chart in this vicinity.

(9.) The court recommends that a fog signal, which could be sounded at frequent intervals, be provided at the Bird Rocks as soon as possible, this being a most important point in navigation of the Cabot straits' entrance to the St. Lawrence.

(Sgd) R. SALMON,  
Commissioner.

We concur :

(Sgd) ARCHIBALD REID, Port Warden and Surveyor to Lloyd's Register.	} Assessors.
J. TEMPLE, Master Mariner.	

MONTREAL, September 15, 1903.

## 'BERGENHUS' (ss.).

This Norwegian steamship was stranded near the mouth of the St. Charles river, harbour of Quebec, on September 24, 1903. The casualty was the subject of a formal investigation held at the Admiralty Court, Quebec, when the court found:—

(1.) That the ss. *Bergenhus* was in a good and seaworthy condition, and properly equipped when she left Montreal.

(2.) That Pilot Eugene Anctil boarded the vessel and took charge about 3.30 a.m., on September 24, off Crawford's wharf, the ship heading towards the Lévis shore, the tide on the last quarter of the ebb, and the lights on both sides of the river being visible. That he gave the order 'hard astarboard,' 'full speed ahead,' and subsequently 'steady,' with the ship heading N. by W., then reducing to half speed with a view of coming to an anchor. That no further order was given till the ship grounded at 3.45.



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o'clock a.m., on the north shore about  $3\frac{1}{2}$  cables to the N.E. of the breakwater light-house, where she remained for one hour, sustaining damage to the extent of some \$8,000 and sixteen (16) days' detention.

(3.) That the orders of the pilot were carried out by the man at the wheel.

(4.) That the master and officers of the vessel are in no way to blame for the stranding.

(5.) That the stranding was caused by the wrongful act of the pilot, Eugene Anctil, steering an improper course.

(6.) That the master used all the means at his disposal to save the ship after the stranding.

(7.) The evidence showed that the pilot had absolutely no knowledge of the application of deviation to a magnetic course, and the court considers that the employment of pilots without a thorough knowledge of the above is reprehensible and dangerous in the extreme.

R. SALMON,  
*Commissioner.*

We concur :

(Sgd.)	JAMES BAIN,	} Assessors.
	Master Mariner.	
	JOHN TEMPLE,	
	Master Mariner.	

QUEBEC, P.Q., October 5, 1903.

Russian ss. 'HEKTOS' and Swedish ss. 'DROTTNING SOPHIA'.

The causes which led to a collision between these steamships, in lake St. Peter, river St. Lawrence, on November 3, 1903, was inquired into by the Commissioner of the Montreal Pilot's Court, whose finding was as follows :—

That the *Hektos* and the *Drottning Sophia*, two ocean steamships, on November 3, A.D., 1903, in the St. Lawrence channel, at a point in Lake St. Peter, did sustain damage by a collision, which was caused through the fault of Joseph Melville Labranche, a branch pilot for and above the harbour of Quebec, and the branch of the said pilot, Joseph Melville Labranche, is hereby declared to be forfeited for a period to be reckoned from this date to the 1st July next, A.D., 1904, during which time he shall be suspended from exercising the functions of a branch pilot.

(Signed)

EDMUND GUERIN,  
*Commissioner of the Montreal Pilots' Court.*

Montreal, P.Q., December 14, 1903.



## APPENDIX No. 5.

ANNUAL REPORT OF ENGINEER IN CHARGE AIDS TO NAVIGATION  
MONTREAL TO KINGSTON.

OTTAWA, December 31, 1903.

TO DEPUTY MINISTER, ETC.,

SIR,—I have the honour to submit my annual report on the work of the Montreal-Kingston division of the Marine and Fisheries Department for the year 1903.

In the spring of 1902, the Department of Railways and Canals turned over to this department the buoyage of the River St. Lawrence between Lachine and Prescott, together with the steamer *Scout*, which was built by that department for buoy work and gate lifting.

Thirty-nine (39) shallow draught gas buoys were received, and of this number fourteen (14) were held as spare buoys to replace those buoys in position which required filling, the practice being to lift a spent buoy and put out a filled one.

This arrangement was unsatisfactory, as it required a large reserve of buoys, and at the time the transfer was made negotiations were in progress with the agents of the Pintsch Compressing Company in Montreal for the installation of a compressor and store holders for the purpose of transporting Pintsch or oil gas from Montreal to the buoys in position.

The plant referred to above was installed and consisted of three welded steel store-holders 5 ft. in diameter and 15 ft. long, each holding 265 cub. ft. per atmosphere, and a 'New York' duplex air pump (standard railway type).

The combined capacity of the three gas storeholders at 10 atmospheres was 7,950 cub. ft. Pintsch gas.

The installation of this plant at a cost of \$4,270 released for general service fourteen (14) gas buoys worth \$21,000, and of this number five (5) were shipped to the Quebec agency and four (4) to the Nova Scotia agency for Halifax harbour.

The gas used for the buoy service above Montreal was an extra refined oil gas, known as Pintsch gas and supplied by the Montreal works of the Pintsch Compressing Company. It was received through a pipe laid from the works to Guy Street basin, Montreal.

During 1902 five special trips were made to Montreal to obtain gas for the buoy service.

In August, 1902, experiments were carried out on board the *Scout* to determine the suitability of acetylene for the lighthouse and buoy service.

A temporary generating plant was erected on the port side of the steamer and consisted of a vertical boiler plate generator 4 ft. in diameter and 6 ft. high, carrying two cast iron hoppers with screw feeds.

This generator was originally intended for town lighting and was loaned to the department. As it was not practicable to put a gasometer on the steamer's deck, the body of a standard swift current buoy 4 ft. in diameter and 10 ft. long, was placed vertically in a large wooden box, ( $4\frac{1}{2} \times 4 \times 8$ ) lined with galvanized iron. A four inch gate valve at the bottom of the buoy provided connection with the tank.

The generator was connected with the buoy-body at the top, and connection made with the compressor from the same point of the buoy-body through a drier and scrubber. A flexible armoured gas hose led from the compressor to the gas buoy. The acetylene was dried by passing over large lumps of carbide and strained through hair felt. No chemical purifier was used.



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The method of operation was as follows :—

The generator (a carbide into water machine) being ready, having sufficient water in the body and carbide in the hopper, the wooden box was filled with water as high as the top of the gate valve which was closed and the buoy-body filled entirely with water. The generator was started for a few minutes and the 4-inch gate valve opened. The gas made, forced the water from the buoy-body into the box, and when the box was partly filled, connection having been made with a storeholder or gas buoy, the compressor was started.

Little difficulty was experienced in keeping the water level in the box fairly constant and this provided a reserve of gas for the compressor.

The apparatus, though crude, worked perfectly at all times, and was used when required until the steamer laid up in the fall of 1902.

During October and November, 1902, experiments were carried out on Lake St. Louis, using mixtures of oil, gas and acetylene and also pure acetylene. At this time difficulty arose with the burners, which were too small and not of the proper type.

On the conclusion of the season's operations and during the winter of 1902 and 1903, further experiments were carried out at the temporary depôt of this division at Morrisburg, and it was found that by using the 'Economic' burner, not smaller than  $\frac{1}{2}$  ft. size, that it is possible to obtain from three to five months' continuous service with one burner.

As the department's steamers are constantly patrolling the river, this was found satisfactory, and in the spring of 1903, the Montreal-Kingston gas buoy service was put on an acetylene basis.

During the past summer the service has been maintained with few complaints.

The evolution of an occulting acetylene light presented more difficulty, and none were installed in 1903, except on the new gas buoys placed late in the season between Montreal and Sorel. But this difficulty has been overcome, and during the season of navigation, 1904, the gas buoys on the starboard side between Montreal and Kingston will carry occulting lights.

New acetylene apparatus has been designed and was in operation in 1903.

The generator, which is of  $\frac{1}{4}$ -inch boiler plate, carries two hoppers, each of which holds 600 pounds of carbide, and the expansion chamber, represented by the buoy-body and wooden box in the original apparatus, forms an integral portion of the new generator. The drier and strainer have been combined, and provision is made for shaking the ash from the carbide, which is contained in a revolving squirrel cage.

A chemical purifier will be added this season to the plant.

The acetylene, on generation, passes in very fine bubbles through a scrubber filled with water. It is then dried and strained and passes to the compressor, then through an 'after cooler' and thence to the gas buoy or gas storeholder.

The 'New York air brake' (two stage compressor without intercooler) has been replaced by a three stage Ingersoll-Sergeant machine made by the James Cooper Manufacturing Company of Montreal. This machine will compress 4,000 feet of free gas per hour and raise it to a pressure of 300 pounds. Fifteen (15) atmospheres or approximately 225 pounds, is the highest pressure used in this gas buoy work.

An increase of about five times the candle power has been obtained by the substitution of acetylene for oil gas, and it is more convenient to generate gas as required than to transport the same in storeholders and equalize and pump into a buoy. The extra run from the buoy to the generating point and back is avoided.

Oil gas costs in Montreal, \$5.10 per 1000 ft. : acetylene costs (carbide) about \$7.50 per 1000 ft.

The ability to rely on an acetylene burner for a given length of time, will also enable the department to make the lighthouse system between Montreal and Kingston practically automatic.

Before the opening of navigation in 1903, the keeper of the lighthouse at Stonehouse point died, and no appointment was made. A gas storeholder and gas buoy lantern were placed at this station and worked in an entirely satisfactory manner during the past season.

Welded steel storeholders have been provided for the lights in this division. They are 20 ft. long, 50 inches in diameter, and hold nearly 4,000 ft. of gas at 15 atmospheres. The larger part of these are placed, and will be connected with special lanterns and lighted on the opening of navigation.



The department having purchased the property at Prescott known as the Labatt property, the temporary depot at Morrisburg was transferred to that point in November and the necessary changes in the buildings are now being carried out. The depot is now known as the Dominion Lighthouse Depot, as special apparatus for the lighthouse service will be made and distributed from this point. It will also be headquarters for the department's steamers for the Montreal-Kingston division.

Anticipating the extension of the gas-lighting service in the Bay of Quinté, application was made to the Department of Militia and Defence for permission to use the shoal tower in Kingston harbour, which was granted. The landing cribs will require to be extended when carbide can be stored there.

The water has been high in the river during the past season, and no accidents have occurred in the river reaches, or Lakes St. Francis and St. Louis, except the striking of the steamer *Keefe* of the Wolvin Line, near gas buoy 98 S. Windmill Point, Lake St. Louis. Examination disclosed boulders outside the gas buoy not known before, and the buoy was moved 100 ft. south.

The lower entrance of the Farran's point canal has proved a source of danger to several vessels. The new steel steamer *Wacandah* on her first trip up the river struck the piers, passed through the locks and sunk in the canal. An American yacht had her bow stove in attempting the entrance. The pilots are of different opinions as to the best method of making the entrance, which is difficult. A current survey of the lower entrance of this canal was made by Mr. Ross, C. E., under orders from Mr. W. A. Stewart, superintendent of operations, St. Lawrence Canals, during the past season, which may throw light on the best method of dealing with this matter.

If the water lowers again to a point approximating the low water of 1895, the deep draught freighters now on the river, will experience difficulty in the river reaches which should be thoroughly swept and in places improved.

The department purchased from Captain W. Murphy of Morrisburg the steamer *Alaska*, (which name was afterwards changed to *Reserve*) for the purpose of sweeping the channel. The *Reserve* is well adapted for the work and has rendered good service. At the latter part of the season she was employed in distributing steel store holders for the lighthouse service.

A scow 70 x 24 x 5 ft. is now under construction at Prescott to be used in conjunction with the *Reserve* for placing and lifting spar and gas buoys. This scow will have a derrick hoisting and swinging engine and can be used for pile driving.

On the arrival of the gas buoys intended for the Sorel-Montreal section they were taken to Lachine by the *Scout*, valves, &c., fitted and charged with acetylene, after which they were placed by Mr. U. P. Boucher, C.E., engineer in charge, Platon to Montreal. The *Scout* will, during the season of 1904, keep the ship channel gas buoys charged.

The dredged cut at the foot of Wolfe island was completed by the Department of Public Works. It is 300 feet wide and is 16 feet deep at extreme low water (November, 1895). Deep draught boats from Kingston can enter the American channel through this cut without the necessity of going around the head of Wolfe Island. This dredged cut is marked by a red gas buoy and a black spar buoy.

The Snake island middle ground spar buoy has been replaced by a black gas buoy showing a fixed light.

No adequate surveys have been made of Lakes St. Francis or St. Louis from Cornwall to Montreal, and this work should be carried out as soon as possible. Correct charts could then be issued, proper buoy plans would be available, and the surveys would be advantageous for any improvements such as dredging and laying out ranges of lights.

A secondary triangulation should also be carried out between Cornwall and Prescott, connected with the United States triangulation of 1872-1873, to provide plans for placing buoys by means of sextant angles and for sweeping purposes.

Respectfully submitted, •

J. F. FRASER,  
Commissioner of Lights.



## APPENDIX No. 6.

## METEOROLOGICAL REPORT.

METEOROLOGICAL OFFICE,

TORONTO, December, 1903.

LT.-COL. F. GOURDEAU,  
Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit the thirty-second annual report of the Meteorological Service of Canada, this report being for the fiscal year, July 1, 1902, to June 30, 1903, with Appendices A and B, reports of St. John and Quebec observatories.

The number of persons in receipt of pay from the Meteorological Service on June 30 for various duties performed in connection therewith was 167. Of this number twenty are employed in the Central Office, and with a few at outside stations devote their whole time to the work of the service; others are occupied in observing during only a portion of each day, and others again are employed only to attend to the display of storm signals when notified.

Since the issue of my last report the following stations have been opened :—

## BRITISH COLUMBIA.

- Class I.—Bamfield, R. G. McLachlan.  
“ II.—Enderby, J. A. Row (resumed).  
“ II.—Kitamaat, Rev. G. H. Raley.

## NORTH-WEST TERRITORIES.

- Class II.—High River, Alta., P. W. Robertson.  
“ II.—Wetaskiwin, Alta., J. H. Walker.  
“ II.—New Hope, Assa., L. G. Summers.  
“ II.—Onion Lake, Sask., Mrs. E. B. Matheson, M.D.  
“ III.—Victoria, Alta., J. A. Mitchell.  
“ III.—Cardston, Alta., Martin Wolf.  
“ III.—Willow Bunch, Assa., McGregor Rapelje.  
“ III.—Lacombe, Alta., Ben. Howell.  
“ III.—Gleichen, Alta., Rev. Canon Stocken.

## ONTARIO.

- Class II.—Walkerton, K. McNaughton.  
“ II.—Vankleek Hill, T. Jamieson.  
“ II.—Belleville, P. C. Jones.  
“ II.—Sutton West, Rev. G. J. Everest.  
“ II.—Niagara Falls, A. H. Telfer.  
“ II.—North Gower, Clarence Craig.  
“ II.—Coldwater, James Lazonby (resumed).  
“ II.—Bear Island, H. G. Wood.



Class II.—Clinton, George Baird.

“ II.—St. Mary's, G. H. McIntyre, (resumed).

“ II.—Madoc, Rev. W. W. Burton.

“ II.—Craigleigh, Andrew Goodchild.

#### QUEBEC.

Class II.—Shawinigan Falls, A. L. Whitworth.

“ II.—Clark City, T. N. Ritchie.

Sunshine recorder, Quebec observatory.

#### NOVA SCOTIA.

Windsor, Rev. C. E. Willets.

#### LABRADOR.

Davis Inlet, Stuart Cotter.

The following stations have become inoperative from various causes :—Carmanah, B.C., resignation of observer ; Dalhousie Mills, removal of observer ; Richmond, Q., resignation of observer ; Bathurst, N.B.

Orillia was closed for a short time owing to the death of Mr. H. W. Fitton, who for 32 years was an efficient and careful observer.

There are now in the Dominion, Newfoundland and Bermuda, 338 meteorological stations using instruments which have been supplied by the government. The observers at 256 of these stations take the observations voluntarily, sending regular monthly returns to the central office, and to these persons are due the hearty thanks of the service. At 42 stations, lying chiefly in the far northern territories of Canada, and at lighthouses in the Gulf of St. Lawrence, small gratuities are allowed observers. At 40 stations distributed at nearly equal intervals throughout the Dominion, three or more observations are taken daily, and as the observers are paid salaries, promptness and careful attention to duty is insisted upon. From 36 of these stations two reports each day are telegraphed to Toronto to be used in the preparation of the daily weather chart.

#### CENTRAL OFFICE.

There have been no changes in the central office staff. Mr. Kingsford returned from military service in South Africa on October 30, and resumed his position as assistant forecast official. The services of Miss Ballard were retained as a temporary assistant secretary throughout the year, it being impossible to prevent the work of the secretary's office from falling into arrears without such assistance.

The routine work of the Central Office has continued to steadily increase, while the number of assistants has remained the same with the exception of one lady type-writer.

I would again respectfully call attention to the fact that the Central Office accommodation is entirely inadequate. In the present building the offices are much smaller than moderate hygienic science recommends—they are offices of 50 years ago. The building might, I am satisfied, be suitably enlarged to meet the requirements of the service, but in the event of it not being deemed expedient to remain at the present site the erection of another building, especially designed would probably still better provide for the successful carrying on of meteorological work in Canada.

I desire to express my appreciation of the steady conscientious manner in which the members of the staff under my direction perform their allotted duties. I have few complaints to make—office hours are well kept and nearly all are deserving of praise for their consistent performance of duty.



## SESSIONAL PAPER No. 21

It is a pleasure to be able to state that satisfactory progress has been made towards bringing the climatological reports nearly to date. Two, those for 1900 and 1901 have been issued during the year just closed and that for 1902 will very shortly be issued. It will soon now be possible to devote attention to the publication of the records for 1891, 1892, 1893 and 1894 which have never yet been printed. The work entailed in the preparation of these reports is very great—each of them has during the past 8 years been an octavo volume of nearly 400 pages. The volume contains a meteorological summary from each of nearly 350 stations and when it is remembered that nearly all the mean values are computed at the Central Office, the labour entailed will be understood.

Other publications are: An annual Meteorological Summary for Toronto: A monthly Weather Review for the Dominion: A monthly Weather Chart, issued three days after the close of each month. This chart serves one very useful purpose. Our observers both voluntary and paid seem to like it and its issue undoubtedly has had the effect of making one and all prompt in sending in returns.

The work of the central office however which is best known to the public is that of forecasting, and this branch of the service is being rapidly extended and forecasts are now issued for all parts of the Dominion, and storm signals have, when it has been deemed necessary, been hoisted at nearly every port, both on the seaboard and on the Great Lakes.

The forecasts have as for some years past been issued twice daily, at about 10 a.m. and 10 p.m. The morning issue is now perhaps the more widely disseminated of the two, and as it covers two days, has been found to be of incalculable value to shippers of perishable goods in many of our business centres. The weather chart on which these forenoon forecasts are based continues to be duplicated and copies are posted at various points in Toronto and Hamilton: including many of the Public Schools where they doubtless have an educational value. The evening issue appears next morning in most of the daily journals and is displayed at every telegraph office in the Dominion.

While every attention is paid to increasing the usefulness of forecasts and storm warnings, working on fairly established lines, the fact has not been lost sight of, that research work is absolutely essential to the future of meteorology, and hence investigation of the probable correlation between solar and terrestrial magnetic changes and meteorological phenomena is steadily pursued. Mr. Webber has made a special study of the storm tracks across Canada and the United States during the past thirty years and the information suitably tabulated affords most valuable data for the solution of several meteorological problems.

The number of publications received in the library during the year was 332; being for the most part annual, quarterly, monthly, weekly and daily reports and periodicals, from the principal astronomical and magnetical observatories of the world.

The Annual Climatological Reports for the year 1900 were issued during the year, 857 copies of which were distributed in the various countries; 852 copies of the Monthly Weather Review; 840 copies of the Toronto General Meteorological Register and 675 copies of the Monthly Weather Chart were distributed to institutions and persons in Canada and the United States. There were also distributed and posted daily, chiefly in Toronto, 88 copies of the Daily Weather Map and four bulletins to the daily newspapers.

## STORM WARNINGS AND FORECASTS.

During the year 1,190 storm warnings were issued to the various districts in Canada where signals are displayed, and of the number 1,101 or 92.8 per cent were verified; on 160 occasions however the wind did not reach and on 83 occasions exceeded the force as indicated by the signal displayed; also 87 warnings were received late owing to issue and 53 on account of delay in transmission.

In connection with the warnings the probable directions from which the gales would blow were also given and of the 1,104 verified as to force, 1,018 or 92.2 were fully and 97.4 per cent fully and partially verified.



3-4 EDWARD VII. A. 1904

The following letter recently received I am sure expresses very nearly the opinion regarding the service held very generally along the seaboard :—

CANSO, NOVA SCOTIA, January 5, 1904.

R. F. STUPART, Esq.,  
Director Canadian Meteorological Service,  
Toronto, Ont.

DEAR SIR,—Allow us to congratulate you on the accuracy of your forecasts for the past few weeks.

If you could see the group of eager fishermen scanning the 'Probs.' every afternoon of late, and to hear their expressions of confidence in the man who issues them, it could not fail to please you.

Our winter haddock fishery is now in full swing and the changeable weather of the past few weeks has made the forecasts a matter of intense interest to our fishermen ; and we feel confident has made it possible for them to prosecute their work more safely and more profitably than they could otherwise have done.

So important do we consider these that we plan to have a large bulletin board placed outside of our office upon which we shall copy 'Probs.' when they come in, that they may be more accessible and plainer to these men to whom the changes in the weather are of such vital importance.

Again assuring you of our appreciation of your splendid work and wishing you the season's compliments.

We remain,  
Yours truly,

(Signed)

A. N. WHITMAN & SON.

It is extremely difficult to discover to what extent the storms signals are instrumental in preventing loss of life and shipping. Shipmasters while ready to admit that they closely watch the signals and the ordinary daily forecasts are scarcely over willing to admit that disaster might have occurred and they put to sea without observing the storm warnings. The months of December, January and February of this fiscal year were marked by many heavy gales in the maritime provinces, and timely warning of these great storms was given in nearly every instance. There is every reason to believe that an enormous amount of property has been saved by the warnings of the Meteorological Service. On the Great Lakes several violent gales occurred during the latter part of November. Good warning was given of these storms, but it is probable that in some instances the warnings were disregarded and at least four large vessels were wrecked with a loss of 51 souls. Requests by telephone from shippers of perishable goods in Toronto for special forecasts regarding temperature changes continue to increase and without doubt the very comprehensive daily bulletins now published in all the larger centres are consulted with the same object in view. It is altogether probable that much valuable produce is saved by these forecasts and many merchants have borne witness to this in letters, some of which accompanied my last report.



SESSIONAL PAPER No. 21

TABLE I.—METEOROLOGICAL SERVICE—Number of Forecasts and percentage of fulfilment under each district, in each month and in the year, July, 1902, to the end of June, 1903, inclusive.

MONTH.	MANITOBA.				LAKE SUPERIOR.				GEORGIAN BAY.				LOWER LAKE REGION.				OTTAWA VALLEY.							
	Number of Forecasts.	Verified.			Number of Forecasts.	Verified.			Number of Forecasts.	Verified.			Number of Forecasts.	Verified.			Number of Forecasts.	Verified.						
		Number fully.	Number partly.	Number not.		Percentage.	Number fully.	Number partly.		Number not.	Percentage.	Number fully.		Number partly.	Number not.	Percentage.		Number fully.	Number partly.	Number not.	Percentage.			
1902.																								
July.....	89	68	18	3	86.5	80	19	6	85.2	118	97	16	5	89.0	120	104	10	6	90.8	81	11	5	89.2	
August.....	90	77	10	3	91.1	88	16	4	88.9	106	83	12	11	84.0	105	80	16	9	83.8	81	18	3	88.2	
September.....	90	65	14	11	80.0	80	21	5	85.4	119	101	11	7	89.5	120	92	22	6	85.8	84	6	10	87.0	
October.....	84	68	14	2	80.9	77	25	7	82.1	123	105	12	6	90.2	123	106	9	8	89.8	91	11	17	81.1	
November.....	79	61	11	7	84.2	71	25	10	78.8	105	78	17	10	82.4	105	76	22	7	82.9	79	13	8	85.5	
December.....	93	61	20	12	76.3	75	19	10	81.3	126	85	27	14	78.1	127	94	22	11	82.7	83	19	17	77.7	
1903.																								
January.....	88	74	10	4	89.8	72	20	6	83.7	111	90	15	6	87.8	111	93	13	5	89.6	83	10	9	86.3	
February.....	77	63	12	2	89.6	72	4	2	94.9	100	79	15	6	86.5	100	85	11	4	90.5	84	9	2	93.2	
March.....	79	57	17	5	82.9	57	19	4	83.1	91	67	16	8	82.4	93	67	18	8	81.7	56	23	11	75.0	
April.....	84	58	23	3	82.7	71	31	7	79.4	123	85	26	12	79.7	126	98	18	10	84.9	76	18	7	84.2	
May.....	81	56	16	9	79.0	88	13	7	87.5	118	85	18	15	79.7	119	91	23	5	86.1	77	15	9	83.7	
June.....	77	63	9	5	87.7	87	8	4	91.9	108	77	24	7	82.4	112	89	16	7	86.6	79	10	6	88.4	
Totals.....	1,011	771	174	66	84.9	918	220	72	85.0	1,348	1032	209	107	84.3	1,361	1075	200	86	86.3	954	163	104	84.8	







SESSIGNAL PAPER No. 21

TABLE II.—METEOROLOGICAL SERVICE.—Forecasts issued at Victoria, British Columbia,  
—Number of forecasts and percentage of fulfilment in each month and in the year,  
July, 1902, to the end of May, 1903, inclusive.

MONTH.	VICTORIA AND VICINITY.					LOWER MAINLAND.					TOTAL.				
	Number of Forecasts.	Verified.				Number of Forecasts.	Verified.				Number of Forecasts.	Verified.			
		Number fully.	Number partly.	Number not.	Percentage.		Number fully.	Number partly.	Number not.	Percentage.		Number fully.	Number partly.	Number not.	Percentage.
1902.															
July.....	132	114	3	15	87.5	114	94	9	11	86.4	246	208	12	26	87.0
August.....	140	116	2	22	83.5	126	97	11	18	81.3	266	213	13	40	82.5
September .....	108	82	8	18	79.6	96	65	11	20	73.4	204	147	19	38	76.7
October.....	123	90	3	30	74.4	109	79	9	21	76.6	232	169	12	51	75.4
November .....	113	80	8	25	74.3	107	83	6	18	80.4	220	163	14	43	77.3
December .....	120	75	9	36	66.3	107	72	15	20	74.3	227	147	24	56	70.0
1903.															
January .....	118	93	8	17	82.2	108	93	2	13	87.0	226	186	10	30	84.5
February.....	117	86	7	24	76.5	108	68	17	23	70.8	225	154	24	47	73.8
March.....	113	88	3	22	79.2	103	74	14	15	78.6	216	162	17	37	78.9
April .....	120	87	11	22	77.1	109	74	19	16	77.3	229	161	30	38	76.9
May.....	117	91	9	17	81.6	109	85	14	10	84.4	226	176	23	27	83.0
*June .....															
Totals .....	1321	1002	71	248	78.5	1196	884	127	185	79.2	2517	1886	198	433	78.9

Missing.

INSPECTION OF METEOROLOGICAL STATIONS.

During the month of August the director inspected the larger number of the telegraph reporting and storm signal stations in the maritime provinces and northern portion of the Gulf of St. Lawrence and also the two stations in Newfoundland, St. John's and St. George's bay which are maintained by the Dominion service. At the majority of the stations, instruments and apparatus were found to be in a most satisfactory condition although as was to be expected, several barometers required cleaning. Observers and agents generally are at present almost without exception satisfactory and are zealous in the performance of their duties. At Southwest point, Anticosti, the new observer Mr. Lemieux has proved himself most capable and efficient. At St. John's, N.F., the observer Mr. Higgins has recently removed to a new house and the instruments were without exception badly located and imperfectly adjusted. The new site however gives a better wind exposure and there are hopes that with the instruction now given, better work may be looked for in the future. St. George's bay had not been visited for many years and the instruments were found much in need of cleaning and adjustment. All were put in order and as the observer is painstaking and efficient, reports may be relied on.

In the spring the director visited Halifax and St. John for the purpose of arranging for a time signal. It had been intended that the ball should be placed in the tower of the custom-house now in course of erection, but as this will not be ready for over a year or perhaps two years, it was decided to ask permission to erect a temporary mast at the Citadel. A variety of delays have occurred and the signal is not



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yet in operation but the various apparatus has been constructed and will it is hoped be soon placed in position. En route back to Toronto, Quebec was visited and the observatory at that city and also the time signal were inspected.

Sixteen stations were inspected by B. C. Webber, who reports as follows: 'Barometers, thermometers and anemometers were cleaned, adjusted and tested at stations where the several instruments were in use. At Barrie, the observer declined to continue the elaborate series of observations as previously taken gratuitously, but to observe the maximum and minimum thermometer readings and the precipitation. Mr. Lazenby at Coldwater consents to take similar observations. At Woodstock, the instruments were in very bad shape and the observing done in the most perfunctory manner, the work being relegated to the chore man. The duties at Winnipeg are still mainly given over to the students at the college, who of course have little or no interest in the work. The hygrometrical observations there as indeed as in many other stations, were found to be so carelessly attended to that they are practically valueless. At Banff in conjunction with Mr. Edwards, superintendent of telegraph construction of the Canadian Pacific Railway, a survey was made of the most suitable route for the Sulphur mountain cable, the decision being that it must adjoin the trail, other routes suggested being out of the question owing to their inaccessibility. The instruments were removed to the new museum building, the mountain barometer unpacked and adjusted, the other instruments to be used in connection with the mountain observatory placed in position and all left in readiness for the subsequent erection of the cable. The observer at Kamloops adheres to his former assertions that the utmost care is taken in observing and that supposed erroneous barometric readings are correct unquestionably abnormal isobars must often occur in that mountainous country. Barkerville the terminal point on the old Cariboo road was visited, reached by a stage drive of 286 miles from Ashcroft the nearest railway station. The thermometers and rain gauge were poorly exposed, but the topographical surroundings will allow of nothing better. No wind gauge is used and there is no exposure for one. In the event of a change at any time, Quesnel would be, in many respects a more suitable point for a telegraph reporting station than Barkerville. A new square barometer was carried to this station and the instrument in use which was in bad shape, put in good order. The time gun work at Vancouver is very faulty. The shed inclosing the gun is shattered to pieces and the gun continually misses fire. On my present visit, the electrical connections were found to be the cause of the gun missing fire. An immediate improvement is imperative, otherwise the gun should be discontinued.'

In November Mr. Menzies was instructed to visit Banff and arrange for the stringing of the cable which had been purchased, to connect the new high level stations on Sulphur mountain with the Museum. The instruments which had been received at Banff direct from France, were unpacked and adjusted. A final choice was made of the route for the cable, and certain necessary alterations made in the upper observing house, but as the season was too far advanced for cable stringing, this was postponed until the spring.

Mr. Allan visited thirteen stations as follows: Durham, Walkerton, Southampton, Collingwood, Barrie, Midland, Port Dalhousie, Port Colborne, Port Stanley, Port Burwell, Pelee Island, Amhestburg and Woodstock, where necessary adjusting and cleaning instruments, and at storm signal stations assuring himself that apparatus was in good order and properly looked after, and in some instances arranging for the painting of signal poles. The steel towers which have been placed at Port Colborne and Midland he reports to be a success and it is expected will last longer than the wooden masts.

#### TIME SERVICE.

During the year ending June 30, 1903, 62 stellar observations for time were made in the meridian with the transit instrument, also 6 solar observations were taken. The position of the stars used were those given in the *Berliner Jahrbuch*. The collimation error of the transit instrument has been determined frequently from micrometrical measurements on the collimating telescope and by reversal on stars. This error remains



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practically unchanged from last year. The stability of the mounting of the transit instrument still remains in a very satisfactory condition, the variation of the azimuth and level errors being exceedingly small

With the equatorial telescope the sun spot observations have been continued, maps of the sun's surface four inches in diameter being obtained on 138 days. On 56 of these days the sun was free of spots, the longest period being from July 3 to September 11, 1902. The period of greatest amount of sun spots was from March 26 to about May 3, 1903. On April 23, a large mass of faculae appeared on the north-east limb of the sun which finally developed into a very large group of small spots being north of the sun's centre about April 28 and 29. This group was by far the largest disturbance on the sun for the year ending June 30, 1903.

The time exchanges with Montreal, Quebec and St. John have been carried on as usual and registered on the chronograph at Toronto. The errors of the Toronto clock and of the time-pieces used by the different observers elsewhere are computed from the latest observations. Both the sidereal and mean time clocks of the Toronto Observatory with their various electrical appliances are working well and giving great satisfaction.

The following table shows the difference between the time by 'Standard Observer' and that given at the various exchanges. The sign + indicates that the time sent from the different observatories is faster than that by 'Standard Observer.' The time by 'Standard Observer' is the arithmetical mean of the times determined at Toronto and Montreal.

—		Toronto.	Montreal.	Quebec.	St. John.
1902.		"	"	"	"
July	4.....	— 0·17	— 0·17	— 0·63	+ 0·14
"	18.....	+ 0·11	— 0·11	— 0·14	+ 0·58
Aug.	15.....	— 0·55	+ 0·55	— 0·98	+ 0·50
Sept.	12.....	+ 0·11	— 0·11	— 0·19	.....
Oct.	3.....	0·00	.....	— 0·91	— 0·67
"	17.....	0·00	.....	— 0·33	0·49
Nov.	21.....	— 0·11	+ 0·11	+ 1·35	+ 0·61
"	28.....	0·00	0·00	— 0·03	— 0·23
Dec.	12.....	+ 0·12	— 0·12	— 0·57	— 0·69
"	26.....	+ 0·04	— 0·04	+ 1·15	— 0·99
1903.					
Jan.	16.....	— 0·11	+ 0·11	— 0·54	+ 0·89
Feb.	13.....	+ 0·25	— 0·25	— 0·70	+ 0·10
Mar.	13.....	+ 0·15	— 0·15	— 0·12	— 0·65
"	27.....	— 0·07	+ 0·07	+ 0·19	+ 0·62
Apr.	17.....	+ 0·10	— 0·10	+ 0·49	+ 0·64
May	15.....	+ 0·34	— 0·34	— 0·97	+ 0·21
"	29.....	— 0·01	+ 0·01	— 0·15	.....
June	12.....	— 0·13	+ 0·13	+ 2·08	.....
"	25.....	+ 0·04	— 0·04	— 0·32	+ 0·41

SEISMOLOGICAL OBSERVATIONS.

The Milne seismographs at Toronto and Victoria, B.C.. have been kept in successful operation throughout the year and photographic copies of any important disturbances from both stations have been regularly made and forwarded to Professor Milne, secretary of the seismological committee of the British Association for comparisons with similar records obtained at other places in the world. There are now some 37 stations in different parts of the world working under their respective governments equipped with the British Association type of instrument. The stations are Shide, Kew, Bidston, Edinburgh, Paisley, Toronto, Victoria, B.C., San Fernando, Cairo, Cape of Good Hope, Calcutta, Bombay, Ceylon, Kodaikaral (S. India) Batavia, Baltimore, Philadelphia,



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Honolulu, Mexico, Mauritius, Trinidad, Christchurch, Sydney, Melbourne, Wellington, Perth (West Australia), Cordova (Argentine), Strassburgh, Coimbra, Beyrut, Vizagapatam, Tiflis, Taschkent, Tokio (Japan), Irkutsk (Siberia), and two instruments at the Azores.

At Toronto from July, 1902, to June, 1903, there were recorded 59 disturbances and at Victoria 70, most of them small but some few very marked and important. These disturbances were the result of world shaking quakes and it is satisfactory to know that the Canadian observations are valued abroad and that they are an important contribution to international science.

All of which is respectfully submitted.

R. F. STUPART.

## APPENDIX 'A'.

ST. JOHN OBSERVATORY,

ST. JOHN, N.B., December 31, 1903.

R. F. STUPART, F.R.S.C.,  
Director, Meteorological Service,  
Toronto, Ont.

SIR,—I have the honour to present the annual report of the St. John observatory for the fiscal year ending June 30, 1903.

The meteorological instruments are all in good condition, and the observations have been recorded without change from the last annual report.

In connection with the time service some changes and additions have been made to the instrumental outfit. A standard astronomical chronograph was received from the Warner & Swasey Co., on September 22, 1902; this instrument has a cylinder of about 7 inches diameter, is fitted with a single pen and when driven at the rate of one turn per minute holds the record for two and half hours, by means of change wheels the cylinder can be driven double speed if desired. After the necessary electrical connections were made this instrument has been in use for recording star observations, clock comparisons and time exchanges. Previous to the installation of the chronograph observations of stars for determination of clock errors and rates were made by the eye and ear method.

The new meridian telescope was received from the makers, Messrs. Troughton & Simms, London, on May 30, 1903, and was mounted on the transit pier which formerly carried the small instrument. The instrument has a reversing carriage and with the delicate level attached to one of the six inch finding circles and micrometer which is available in declination as well as right ascension may be used as a zenith telescope as well as transit. Small electric lamps are used for the illumination.

The standard sidereal and mean time transmitting clocks have been giving good satisfaction and no trouble has occurred with the various electrical connections. Signals from the transmitting clock are telegraphed over the greater portion of the maritime provinces for the two minutes ending at 10 a.m. every week day morning, and are used generally as a standard of time, also by navigators in many of our ports for comparing rating their chronometers. Special signals have frequently been sent on application and from British, French, American and German war ships, to the English and French cable ships as well as to vessels of the merchant marine.

The time ball on customs building has been dropped each week day at 1 p.m. standard time of the 60th meridian, for the benefit of shipping and others.

The issue of the morning weather bulletin continues to increase, reports of prevailing conditions from the different stations together with the forecasts and synopsis



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received from Toronto are of inestimable value to mariners as well as being of great importance and utility to the general public. The bulletin is posted in public places, published by all of our daily papers and distributed through the mails to adjacent points. The forecasts are telephoned to St. Martin's and posted at the telephone exchange. Storm warnings are also telephoned to St. Martin's and signals displayed for the benefit of shipping in that part of the Bay of Fundy.

There has been a decided increase in the number of inquiries from those whose commercial and other interests are affected by weather changes and a considerable portion of my time especially during the winter and stormy months is taken in answering personal and telephone calls. Information from the office records is in constant demand to assist in the settlement of various claims and at times in making statements for the courts. Storm signals are as formerly displayed from the staff on southern tower of customs buildings. A decided improvement was made by substituting electric lamps in place of the oil lights formerly used at this station, they may be seen from a much greater distance and are not so liable to be extinguished by high winds.

I have the honour to be, sir,  
Your obedient servant,

D. L. HUTCHINSON,  
*Director, St. John Observatory.*

## APPENDIX 'B.'

To the Director,  
Meteorological Service, Toronto.

SIR,—I have the honour to transmit my annual report for the fiscal year ending June 30, 1903.

My duties at the observatory have been the same as in the past years, and consist in meteorological and transit observations for time. I also answer frequent inquiries made by the public respecting this service, and am obliged to appear as witness in certain cases before the courts.

During the present year, a sunshine recorder was added to the ordinary instruments and has been used since the 1st September last.

The time ball service has been very much improved by placing a direct wire to the Citadel, and the whole is in good working order. The ball was dropped for the first time this spring on April 15, date of the opening of navigation.

Several chronometers were rated at this observatory, and the correct time given to watchmakers and others every day as formerly.

Visitors were received at the observatory on several clear nights and during the day.

I have the honour to be, sir,  
Yours respectfully,

ARTHUR SMITH, *Director.*



## MAGNETIC OBSERVATORY.

Lieut.-Colonel F. GOURDEAU,  
Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to report that the Magnetic Observatory has been maintained in operation during the past year, and the results obtained have been in every way satisfactory. Since the removal of the observatory to the country Mr. Menzies has continued in immediate charge and has resided in a rented house in Agincourt, about a mile distant, which arrangement is not entirely satisfactory, as the owner of the house, which is the only one available, will not give a satisfactory lease, and is constantly threatening to resume occupation unless the rent, already high, be still further augmented. It would be well were the Government to erect a small house on the observatory property. Should the neighbourhood ever be invaded by the electric trams the house and property could with little doubt be sold at a satisfactory figure.

There have been no mechanical alterations or adjustments made to the differential magnetographs. By means of these instruments continuous photographic records have been maintained of the declination and horizontal force, as also the temperature changes connected therewith. The resulting curves have been duly measured, checked and tabulated and the means computed. The absolute determinations of declination, inclination and horizontal force have been made at stated intervals and the results compared with photographic curves and auxiliary scale readings of differential instruments. The time values of all curves have been determined by daily comparisons with chronometers, whose rates were checked by weekly time exchange with Toronto. There has been the usual percentage of loss of record owing to light failure and defect (viz., old age) of driving clock. Meteorological records, consisting of registration of wind velocities and directions by means of electrical anemograph, readings of maximum, minimum and incidental temperatures, state of weather, &c., have been maintained and results forwarded to head office.

All of which is respectfully submitted.

I have the honour to be, sir,  
Your obedient servant,

R. F. STUPART,  
*Director.*



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## APPENDIX No. 7.

REPORT OF THE CHAIRMAN OF THE BOARD OF EXAMINERS OF  
MASTERS AND MATES.

OTTAWA, August, 1903.

To the Deputy Minister of  
Marine and Fisheries.

SIR,—I have the honour to submit the annual report relating to the examination of candidates for certificates of competency as masters and mates, during the fiscal year ended June 30, 1903.

I was appointed Chairman of the Board of Examiners of Masters and Mates, on January 30, 1903 ; and on my arrival at Halifax, on February 18, following, commenced the duties of my office. From August 10, 1901, to the date of my arrival Captain Bloomfield Douglas, acted as chairman, and his duties in that capacity were to conduct examinations for foreign going certificates, at Halifax and Yarmouth, N.S., and St. John, N.B., and for coasting and minor waters certificates at Halifax and St. John.

On April 4, I undertook the superintendence of examinations for every grade of certificate in the various trades throughout the Dominion, which includes in addition to the examinations for foreign-going certificates at Halifax, Yarmouth and St. John examinations at Lunenburg, Yarmouth and Sydney, N.S. ; Quebec, P.Q. ; Charlottetown, P.E.I. ; Ottawa, Kingston, St. Catharines and Rat Portage, Ontario ; Winnipeg, Manitoba ; Nelson, Victoria and Vancouver, B.C. ; for coasting, inland or minor waters certificates as the case may be, examinations at these ports having been previously superintended by the department at Ottawa.

The total amount collected in fees from applicants for certificates, during the fiscal year ended June 30, 1903, was \$5,790.50, and the amount expended on account of the service, as will be seen by Appendix No. 1 to this report, was \$4,996.06, leaving a balance to this service of \$794.44. The vote for this service was \$5,000. and the sum expended to June 30, 1903, \$4,996.06, leaving an unexpended balance of \$3.94.

During the year, 468 certificates have been issued ; and 50 candidates have failed on examination to procure certificates.



The following statements show the number of candidates examined at each port, during the twelve months ended June 30, 1903; and the total number of certificates issued for each trade :—

Name of Port.	Inland and coasting number of candidates examined.		Inland and coasting number of candidates failed.		Foreign Sea-going number of candidates examined.			Foreign sea-going number of candidates failed.		
	Master.	Mate.	Master.	Mate.	Master.	Mate.	2nd Mate.	Master.	Mate.	2nd Mate.
Charlottetown .....	6	2	1							
Dalhousie .....	1									
Fredericton .....	1		1							
Halifax .....	13	2	2		3	7	14	1	2	1
Kingston .....	17	11	4							
Lunenburg .....	7	3	1							
New Castle, N.B. ....	3		1							
Nelson .....	3	6								
Ottawa .....	20	10	1							
Quebec .....	18	10	1	1						
Rac Portage .....	11		1							
Richibucto .....	1									
St. John .....	18	4	2		3					
St. Catharines .....	57	35	6	3						
Sorel .....	4									
Sydney .....	19	5	2							
Spanish River .....	1									
Vancouver .....	40	20	5	4						
Victoria .....	23	9	1		5	9	4	3	3	1
Wallaceburg .....	1									
Winnipeg .....	1	3		1						
Yarmouth .....	31	13	1		2	2	5			
Totals .....	299	133	30	9	13	18	23	4	5	2

	Compe- tency.	Service.	Total.
Foreign Sea-Going .....	45	Nil	45
Coasting .....	172	6	178
Inland .....	89	1	90
Minor Inland .....	153	2	155

A list of certificates issued during the twelve months ended June 30, 1903, will be found in supplement No. 1 to this report.

Since taking up the duties of chairman, I have made several trips in the interest of the service, viz., to Halifax, Yarmouth and St. John in March, for the purpose of seeing examinations conducted at those ports and to ascertain the requirements of the examination rooms, as to books, instruments, &c.

On May 8 I proceeded to Victoria, B.C., for the purpose of examining a candidate for the position of examiner for the port of Vancouver, and to inquire into sundry matters connected with the department.

In an interview with members of the Shipmasters Association of B. C., various reforms and alterations were suggested to the existing regulations governing the examination of masters and mates. Their suggestions have been laid before you in my report of 1st June.

On my return journey I interviewed Captain L. H. Fraser, the examiner of masters and mates at Nelson, B.C., and Commander E. B. Tinling, examiner of masters and mates at Winnipeg.



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Most of the examiners pointed out the necessity of raising the standard of examination for coasting and inland waters certificates especially for tug boats ; and limiting the coasting voyage to our own, Newfoundland and the adjacent American coasts. My proposals for an amendment to the Masters and Mates Act give effect to some of these representations.

I have the honour to be, sir,

Your obedient servant,

R. SALMON,

*Chairman.*



## APPENDIX No. 8.

## REPORT ON LIFE SAVING STATIONS.

To the Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—In obedience to instructions contained in your letter of the 22nd inst., I have the honour to submit the following report on the life-saving stations in the Maritime provinces, Sable island excepted, that being under the inspection of Mr. C. A. Hutchins, superintendent of lighthouses in the province.

## INSPECTION OF STATIONS.

The whole of the stations have been inspected by me during the year 1903, St. Paul's island excepted; but during an interview with the superintendent of the island, Mr. Samuel Campbell, in Halifax, in November last, I received the fullest information and assurance from that officer, that his station was in a complete state of efficiency and discipline.

The other stations, when I inspected them, were found to be efficient, discipline has been carefully maintained, and a laudable and earnest desire was exhibited on the part of the coxswains in charge and the crews, to be ready to render life saving service in case of wreck.

## SERVICES AT WRECKS.

The following casualty occurred and assistance was rendered by the life saving station at Yarmouth since the date of my last report in October, 1902.

The schooner *M. J. Solay* missed stays and stranded on Cape Fourchu, November 31, 1902, and the coxswain and crew of the Yarmouth life boat went to her assistance.

## HERRING COVE.

The launching ways at this station have been efficiently renewed and repaired; rocks in the channel have been removed and the station has been much improved and protected by the breakwater recently completed to seaward of the boat house and launching ways.

A new Beebe-McLellan self-bailing boat is in course of construction by Mr. John Morrison of Shelburne, and will be sent there when completed.

## DEVIL'S ISLAND.

The Dobbin self-righting life boat at this station, is in bad order, and will shortly require extensive and expensive repairs. I strongly recommend that a Beebe-McLellan self-bailing boat be built by Mr. John Morrison of Shelburne for this station at a cost of \$240.00.

As reported previously, the Dobbin self righting boats cost over \$500. They are very heavy to handle by a crew of men, they are slow in a strong head wind and sea, and if blowing hard, almost impossible to pull off from a lee shore.



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## DUNCAN'S COVE.

The Dobbin self righting boat at this station, was condemned, as being unseaworthy and not worth extensive and costly repairs.

A Beebe McLellan self-bailing boat has been built by Mr. Morrison of Shelburne, in lieu of the condemned boat.

## SCATTARIE.

A new Beebe-McLellan self-bailing boat has been built for this station by Mr. Morrison, and has recently been placed there.

## SEAL ISLAND, WEST STATION.

The small life boat, found to be unseaworthy and faulty in construction, has been condemned and replaced by a new Beebe-McLellan self-bailing boat built by Mr. John Morrison of Shelburne.

## SEAL COVE, GRAND MANAN, N.B.

The launching ways, consisting of a heavy timber frame work from the level of the boat house door to the rocky shore, with railway rails, continued on the rocks to the sandy beach at low water springs, remained in as good order as when placed under my supervision in August, 1900. Neither the heavy ice in the winter, nor the heavy seas from S. E. gales have had any effect on the structure.

Although this form of launching ways is more expensive than timber with the iron plates for rails, it is more economical in the end.

In reference to this station, I have great pleasure in reporting that the coxswain, Mr. Frank Benson, keeps it in excellent and efficient order, maintaining good discipline and watchfulness on the part of the crew.

## GENERAL BI-MONTHLY DRILLS.

The crews of the respective stations in the maritime provinces, have been regularly drilled from and including the months of May and November.

The coxswains' reports have been sent every month and certified to by me.

## LYLE GUN APPARATUS.

There are three sets of this apparatus in the province of Nova Scotia.

No. 1 at St. Paul Island.

No. 2 at Duncan's Cove.

No. 3 in reserve at Halifax.

The crews at St. Paul island and Duncan's cove have been frequently drilled and the apparatus is in efficient order.

I have the honour to remain, sir,

- Your obedient servant,

BLOOMFIELD DOUGLAS, R.N.R.,  
*Naval Assistant.*



## LIST OF LIFE SAVING STATIONS.

## BAY OF FUNDY.

1. *Seal cove*.—Established in 1898 ; F. Benson, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew, \$1.50 per drill, and extra when engaged saving life ; description of boat, Beebe-McLellan surf-boat, self-bailing, 25 feet long, cost \$250, built at Shelburne, N.S. ; equipment, full regulations ; remarks, iron rails laid in 1900.

2. *Yarmouth*.—Established in 1886 ; A. Cain, coxswain ; No. of crew, 7 ; coxswain's salary per annum, \$75 ; pay of crew, \$1.50 per drill, and extra when engaged saving life ; description of boat, Dobbin's pattern, self-bailing and self-righting, 25 feet long, cost \$575, built at Dartmouth, N.S. ; equipment, full regulations.

3. *Mud island*.—Established in 1887 ; J. Pitman, coxswain ; coxswain's salary per annum, \$80 ; description of boats, fishing boats and dories, cost \$80 per annum ; equipment, ordinary ; remarks, kept by contract with fishermen.

4. *Seal island*.—Established in 1880 ; H. Hitchens, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$250 ; pay of crew, \$100 each per annum ; description of boat, Beebe-McLellan boats on east and west sides, cost \$240 each, one built at Halifax and one at Shelburne, N.S. ; equipment, full regulations.

## ATLANTIC COAST.

5. *Clark's harbour*.—Established in 1900 ; Thomas N. Nickerson, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew, \$1.50 per drill, and extra when saving life ; description of boat, Beebe-McLellan self-bailing, 25 feet long, low ends, cost \$250, built at Shelburne, N.S. ; equipment, full regulations ; remarks, boat house and gear cost \$700.

6. *Blanche*.—Established in 1895 ; W. A. B. Smith, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew \$1.50 per drill, and extra when saving life ; description of boat, Beebe-McLellan, surf-boat, self-bailing 25 feet long, cost \$250, built at Shelburne, N.S. ; equipment, full regulations ; remarks, new boat in 1901.

7. *Port Mouton*.—Established in 1889 ; J. Frausel, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew \$1.50 per drill, and extra when saving life ; description of boat, Beebe-McLellan self-bailing, 25 feet long, cost \$250, built at Shelburne, N.S. ; equipment, full regulations.

8. *Duncan's Cove*.—Established in 1886 ; J. W. Holland, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew, \$1.50 per drill, and extra when saving life ; description of boat, Dobbin's pattern, self-righting bailing, 25 feet long, cost \$575, built in Dartmouth, N. S., equipment, full regulations.

9. *Herring Cove*.—Established in 1885 ; J. Gorman, coxswain ; No. of crew 7 ; coxswain's salary per annum, \$75 ; pay of crew \$1.50 per drill and extra when saving life ; description of boat, Dobbin's pattern, self-righting and bailing, 25 feet long, cost \$575, built at Dartmouth, N.S. ; equipment, full regulations ; remarks, Beebe-McLellan boat building for this station.

10. *Devil's Island*.—Established in 1885 ; G. DeYoung, coxswain ; No. of crew 7 ; coxswain's salary per annum \$75 ; pay of crew, \$1.50 per drill and extra when saving life ; description of boat, Dobbin's pattern, self-righting and bailing, 25 feet long, cost \$575, built at Dartmouth, N.S. ; equipment, full regulations ; remarks, Beebe-McLellan boat recommended for this station.



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11. *Whitehead*.—Established in 1890 ; H. P. Munroe, coxswain ; No. of crew 7 ; coxswain's salary per annum \$75 ; pay of crew \$1.50 per drill and extra when saving life ; description of boat, Dobbin's pattern, self-righting and bailing, 25 feet long, cost \$575, built at Darmouth, N.S. ; equipment, full regulations.

12. *Scatterie*.—Established in 1885 ; F. Martell, coxswain ; No. of crew 7 ; coxswain's salary per annum \$75 ; pay of crew \$1.50 per drill and extra when saving life ; description of boat, Beebe-McLellan self-righting boat, 25 feet long, cost \$240, built at Shelburne, N.S. ; equipment, full regulations.

13. *St. Paul Island*. Established in 1885 ; coxswain, superintendent of Humane Establishment ; No. of crew 3 ; pay of crew, \$300 each per annum ; description of boat, Beebe-McLellan self-bailing, 25 feet long, cost \$250, built at Shelburne, N.S. ; equipment, full regulations ; remarks, Lyle gun added in 1890.

BLOOMFIELD DOUGLAS, R.N.R.

*Naval Assistant.*



3-4 EDWARD VII., A. 1904

LIFE Saving Stations maintained

Number.	Stations.	Established.	Coxswain.	Crew.	Coxswain's Salary. Per annum.	Pay of Crew.
Bay of Fundy—						
1	Seal Cove, . . . . .	1898	F. Benson . . . . .	7	75	\$2.00 per drill, and extra when engaged saving life.
2	Yarmouth . . . . .	1886	A. Cain . . . . .	7	75	" " . . . . .
3	Mud Island. . . . .	1887	J. Pitman . . . . .		80	. . . . .
4	Seal Island . . . . .	1880	H. Hitchens . . . . .	7	250	\$100 each of crew per annum . .
Atlantic Coast—						
5	Clark's Harbour . . . . .	1900	J. M. Kenny . . . . .	7	75	\$2.00 per drill, and extra when saving life.
6	Blanche . . . . .	1895	W. A. B. Smith. . . . .	7	75	" " . . . . .
7	Port Mouton . . . . .	1889	J. Frowell . . . . .	7	75	" " . . . . .
8	Duncan's Cove . . . . .	1886	J. W. Holland . . . . .	7	75	" " . . . . .
9	Herring Cove. . . . .	1885	J. Gorman . . . . .	7	75	" " . . . . .
10	Halifax . . . . .	1900	. . . . .			No crew here . . . . .
11	Devil's Island . . . . .	1885	G. de Young . . . . .	7	75	\$2.00 per drill, and extra when saving life.
12	White Head . . . . .	1890	H. P. Munroe . . . . .	6	75	" " . . . . .
13	Sable Island . . . . .	1885	( G. Soderberg. . . . . J. Ritcey . . . . .		250 ) 225 )	Paid as island staff . . . . .
14	Scatterie Island . . . . .	1885	F. Martell . . . . .	7	75	\$2.00 per drill, and extra when saving life.
Gulf of St. Lawrence—						
15	St. Paul's Island . . . . .	1885	Supt. Humane Establishment.	3		\$300 each per annum . . . . .
16	Pictou Island. . . . .		Alex. Currie . . . . .	7	75	\$2.00 per drill, and extra when saving life.
17	Cape Tormentine. . . . .	1893	No organized crew.			. . . . .
Great Lakes—						
18	Wellington. . . . .	1883	" . . . . .			\$2.00 per drill, and extra when saving life.
19	Consecon. . . . .	1898	W. A. Young . . . . .	7	75	" " . . . . .
20	Cobourg . . . . .	1882	D. Rooney . . . . .	7	75	" " . . . . .
21	Port Hope . . . . .	1889	W. T. Clarke . . . . .	7	75	" " . . . . .
22	Toronto Island . . . . .	1883	Wm. Ward . . . . .	7	75	" " . . . . .
23	Long Point. . . . .	1902	Geo. Wisner . . . . .	7	†75 & 40	\$2.00 per drill, and \$40 per month for three months.
24	Port Stanley . . . . .	1885	Wm. Berry . . . . .	7	75	\$2.00 per drill, and extra when saving life.
25	Point Pelee . . . . .	1900	W. A. Grubb, jr. . . . .	7	75	" " . . . . .
26	Goderich. . . . .	1886	J. R. Craigie . . . . .	7	75	" " . . . . .
27	Collingwood . . . . .	1885	P. Doherty . . . . .	7	75	" " . . . . .
28	Kincardine . . . . .	1903	Thos. McGaw . . . . .	7	75	" " . . . . .

\* Crew at station permanently for three months during autumn. † \$75 and \$40 per month for three.



SESSIONAL PAPER No. 21  
by the Dominion Government.

Description of Boat.	Cost.	Where Built.	Equipment.	Remarks.
	\$			
Beebe-McLellan surf-boat, self-bailing, 25 feet long.	250	Shelburne, N.S..	Full regulation	Iron rails laid in 1900.
Dobbin's pattern, self-bailing and self-righting, 25 feet long.	575	Dartmouth, N.S..	"	"
Fishing boats and dories . . . . .	80 pr.an.	. . . . .	Ordinary . . . . .	Kept by contract with fishermen.
Beebe-McLellan boat on east side, surf-boat on west side.	240	Shelburne, N.S..	Full regulation	New boat, 1903.
Beebe-McLellan, self-bailing, 25 feet long, low ends.	250	"	"	Boat house and gear cost \$700.
Beebe-McLellan surf-boat, self-bailing, 25 feet long.	250	Dartmouth, N.S.	"	New boat in 1901.
Dobbin's pattern, self-righting and bailing, 25 feet long.	575	"	"	"
Beebe-McLellan surf-boat, self-bailing, 25 feet long.	240	Shelburne, N.S..	"	Lyle gun established here in 1900 ; new boat, 1903.
Dobbin's pattern, " . . . . .	250	"	"	"
" " . . . . .	375	"	Ordinary . . . . .	This is a spare boat which can be used with volunteer crew when required.
" " . . . . .	575	"	Full regulation	"
" " . . . . .	575	"	"	Lyle gun.
Two Dobbin's self-righting and bailing boats and one Beebe-McLellan surf-boat, self-bailing.	1,100	Halifax, N.S . . .	"	Lyle gun and rocket apparatus kept here. Coxswains are under the control of Superintendent of Humane Establishment.
Beebe-McLellan surf-boat, self-bailing, 25 feet long.	240	Shelburne, N.S..	"	New boat. 1903.
Beebe-McLellan, self-bailing, 25 feet long, low ends.	250	"	Full equipment	Lyle gun added in 1900.
Dobbin's pattern, self-righting and bailing, 25 feet long.	575	Dartmouth, N.S.	"	"
Boats of winter mail service. . . . .	. . . . .	. . . . .	Ordinary . . . . .	
Dobbin's pattern, self-righting and bailing.	750	Buffalo, N.Y....	Full equipment	Removed from Poplar Point in 1900.
" " . . . . .	750	"	"	Removed from Wellington in 1893.
" " . . . . .	575	Goderich, Ont . .	"	"
" " . . . . .	620	"	"	"
" " . . . . .	600	"	"	New boat, 1895.
Surf-boat . . . . .	330	Collingwood. . . .	"	New station and new boat, 1902.
Beebe-McLellan surf-boat, self-bailing, 25 feet long.	350	"	"	"
Surf-boat . . . . .	330	"	"	Boat house removed from Point up 200 yards and tramway built.
" . . . . .	330	"	"	New boat. 1902.
Beebe-McLellan self-bailing surf-boat.	375	"	"	New boat in 1896.
" " . . . . .	350	"	"	New boat, 1903.

months while permanently at station.



APPENDIX No. 9.

STATEMENT relating to the Wharfs under the control of the Department, on  
June 30, 1903.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Ontario.</i>				\$ cts.
Bruce Mines.....	Wm. Fleming.....			117 79
Cockburn Island.....	Alfred Monck.....	May 20, 1890.	25 p.c. of collections....	33 39
Goderich.....	W. Marlton....	Feb. 14, 1894.	25 ".....	400 10
Hilton, St. Joseph Id., Algoma	E. Stubbs.....	June 20, 1898.	50 ".....	269 50
Kingsville.....	A. E. Malott ..	Nov. 6, 1895.	25 ".....	62 43
Morpeth.....	C. Stammers.....	Aug. 1, 1894.	25 ".....	
North Bay.....	W. McKenzie.....	Oct. 9, 1900.	25 ".....	
Port Rowan.....	John Collett.....	May 2, 1898.	25 ".....	
Richard's Landing, Algoma..	R. Armstrong.....	Mar. 11, 1899.	25 ".....	245 06
Rondeau.....	W. R. Fellows.....	Dec. 17, 1888.	25 ".....	66 03
Sault Ste. Marie.....	Geo. A. Boyd. ....	April 9, 1897.	\$142 per month during season of navigation...	1,774 21
Sheguiandah.....				103 56
Southampton.....	Geo. McVittie.....	Aug. 16, 1895.	25 p.c. of collections....	116 23
Summerstown.....	Under lease.....			
Thessalon, Algoma.....	D. J. Saudie.....	Apr. 22, 1902.	25 p.c. of collections....	231 47
Warton.....	G. Phillips.....	" 1902.	25 ".....	120 27
<i>Quebec.</i>				
Total.....				3,540 04
Agnes.....	L. A. Roy.....	Nov. 27, 1891.	25 p.c. of collections....	
Anse St. Jean.....	F. Savoie.....	Mar. 13, 1895.	25 ".....	48 95
Baie St. Paul.....	Vacant.....		25 ".....	
Baie St. Paul, Isolated Block.	A. Simard.....	Aug. 25, 1891.	25 ".....	83 06
Beauport.....	D. Giroux.....	Nov. 11, 1896.	25 ".....	
Berthier.....	E. Gaumond.....	July 5, 1897.	50 ".....	54 25
Cap-à-l'Ange.....	Jos. Guay.....	Oct. 7, 1896.	25 ".....	53 50
1 Carleton.....	Jos. E. Cullen.....	Mar. 25, 1896.	\$50 per annum.....	20 53
Cascades.....	Moïse Leroux.....	Oct. 20, 1897.	25 p.c. of collections....	
Cedars.....	J. Reay.....	April 29, 1898.	25 ".....	
Chicoutimi.....	Thomas Tremblay.....	May 13, 1901.	25 ".....	306 03
Coteau du Lac.....	M. St. Amour.....	Sept. 21, 1896.	25 ".....	11 91
Coteau Landing.....	J. A. Prieur.....	May 25, 1897.	25 ".....	
Echo Vale, Lac Megantic....	D. P. Matheson.....	May 16, 1894.	25 ".....	
Esquimaux Point.....	Vacant.....			
Grand River.....	Geo. Beaudin.....	Nov. 16, 1896.	25 ".....	137 28
Greece's Point.....	T. Ranger.....			28 11
Isle aux Grues.....	Jos. Painchaud.....	Feb. 17, 1890.	25 ".....	
Isle Perrot.....	Roger Leduc.....	Oct. 20, 1897.	25 ".....	
Knowlton's Landing.....	L. Knowlton.....	Nov. 26, 1897.	25 ".....	
Lacolle.....	R. J. Robinson.....	Mar. 8, 1894.	25 ".....	10 69
2 Les Eboulements.....	M. Tremblay.....	Sept. 4, 1894.	25 ".....	102 75
L'Islet.....	Octave Morin.....	Feb. 8, 1893.	25 ".....	
Longneuil.....	Eusèbe Denicourt....	May 15, 1901.	25 ".....	
Magog.....	Edward Addy.....	June 20, 1898.	25 ".....	
Matane.....	Louis Durette.....	Aug. 25, 1900.	25 ".....	94 34
3 Murray Bay.....	Elie Maltais.....	" 15, 1893.	25 ".....	120 25
New Carlisle.....	John C. Hall.....	June 4, 1889.	25 ".....	116 12
Perce.....	T. W. Flynn.....	Jan. 19, 1893.	25 ".....	8 17
Port Daniel.....	C. Sweetman.....	Mar. 2, 1901.	\$50 per annum.....	74 44

Commission on collections not to exceed \$200 per annum.

1	Paid wharfinger from general collection.....	\$24 42
2	" " ".....	28 50
3	" " ".....	39 81
		\$92 73



SESSIONAL PAPER No. 21

STATEMENT relating to Wharfs, &c.—*Continued.*

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Quebec—Con.</i>				\$ cts.
Port Lewis.....	Sam. Carson.....	Sept. 21, 1899.	25 p.c. of collections.....	
Rimouski.....	Chas. Lepage.....	July 24, 1894.	25 ".....	
Rivière Ouelle.....	J. Hudon dit Beau-lieu.....	Nov. 28, 1892.	25 ".....	
Rivière du Loup.....	F. E. Gilbert.....	May 26, 1900.	25 ".....	356 01
St. Anicet.....	S. Dupuis.....	Sept. 14, 1896.	25 ".....	
St. Alphonse de Bagotville.....	Abel Tremblay.....	July 7, 1891.	25 ".....	128 80
St. Irénée.....				58 87
St. Jean d'Orleans.....	L. Lachance.....	Sept. 26, 1896.	25 ".....	74 58
St. Jean Port Joli.....	J. Pelletier.....	" 14, 1896.	25 ".....	
Ste. Cécile du Bic.....	Olivier Ouellette.....	Aug. 24, 1900.	25 ".....	44 74
St. Laurent d'Orleans.....	Ed. Chabot.....	" 25, 1894.	25 ".....	19 33
St. Thomas de Montmagny.....	L. L. Dionne.....	Oct. 22, 1896.	25 ".....	3 30
St. Zotique.....	J. M. Leroux.....	Sept. 21, 1896.	25 ".....	
Tadousac.....	A. Christiansen.....	Oct. 20, 1897.	25 ".....	72 44
Trois Pistoles.....	D. Damour.....	May 10, 1886.	25 ".....	
Valois Point.....	L. Gastonguay.....	Oct. 20, 1897.	25 ".....	
Ville Marie.....	Jules Maillard.....	Feb. 2, 1899.	25 ".....	
Total.....				2,028 45
Less.....				92 73
<i>Nova Scotia.</i>				1,935 72
Arisaig.....	H. R. McAdam.....	Dec. 30, 1898.	25 p.c. of collections.....	
Avonport.....	L. F. Fuller.....	Aug. 15, 1902.	25 ".....	13 21
Babbins Cove.....	Alex. Thomas.....	Oct. 20, 1897.	25 ".....	4 47
Barrington.....	J. H. Christie.....	Aug. 31, 1896.	25 ".....	103 14
Bass River.....	Jotham Fulton.....	Jan. 6, 1898.	25 ".....	
Bayfield.....	Roderick Grant.....	April 23, 1902.	25 ".....	47 26
Bear Point.....	E. R. Smith.....	Feb. 19, 1902.	".....	6 63
Belliveau Cove.....	St. Clair Thérilau.....	Nov. 24, 1892.	25 ".....	66 40
Broad Cove.....	John Teal.....	June 12, 1893.	25 ".....	
Broad Cove Marsh.....	Hugh McDonald.....	Oct. 19, 1892.	25 ".....	
Brooklyn.....	F. T. Gardiner.....	" 20, 1882.	25 ".....	
Canada Creek.....	Henry Dickey.....	Aug. 12, 1899.	25 ".....	5 78
Cape Cove.....	J. A. Ellis.....	May 14, 1897.	25 ".....	
Centreville.....	Alfred Ward.....	" 29, 1897.	25 ".....	108 23
Chipman's Brook.....	John Kirby.....	" 24, 1900.	25 ".....	0 29
Church Point.....	Chas. F. Belliveau.....	Aug. 20, 1892.	25 ".....	54 92
Cranberry Head.....	Abram Thurston.....	Feb. 16, 1889.	25 ".....	
Cribbens Pier, Antigonish Hr.	A. R. Boyd.....	Oct. 2, 1895.	25 ".....	
Delap's Cove.....	R. W. McCaul.....	Nov. 28, 1889.	25 ".....	4 35
Descousse.....	Thos. Boudrot.....	Feb. 22, 1902.	25 ".....	31 27
Digby.....	W. W. Hayden.....	April 20, 1897.	25 ".....	2,177 50
Eagle Head.....	Nathan Leslie.....	Jan. 9, 1889.	25 ".....	
East Bay.....	Donald McInnis (Ronald's son).....	April 5, 1886.	50 ".....	
East River, Sheet Harbour.....	Malcolm McFarlane.....	May 20, 1890.	25 ".....	
Grand Narrows, Victoria Co.	F. X. McNeil.....	Nov. 11, 1896.	25 ".....	
Grand Narrows, Cape Breton Co.....	Neil McNeil, jr.....	Aug. 6, 1898.	25 ".....	
Grand Village.....	Vacant.....			
Hall's Harbour.....	T. A. Neville.....	Jan. 8, 1897.	25 ".....	34 77
Hampton.....	Judson Foster.....	Aug. 25, 1888.	25 ".....	36 82
Hantsport.....	Vacant.....			
Harbourville.....	Isaac Cook.....	May 28, 1897.	25 ".....	25 19
Horton Landing.....	F. G. Curry.....	April 30, 1898.	25 ".....	1 50
Iona, Grand Narrows.....	F. T. X. McNeil.....	June 8, 1901.	25 ".....	
Irish Cove.....	Malcolm McNeil.....	" 6, 1902.	25 ".....	14 26
Isaac's Harbour.....	T. D. Cook.....	Jan. 30, 1902.	".....	12 39
Jordan Bay.....	John Fredericks.....	Feb. 20, 1900.	25 ".....	119 30
Kelly Cove.....	Jos. B. Huskins.....	April 11, 1899.	25 ".....	
Little Narrows.....	Vacant.....			
Lismore.....	D. A. McKinnon.....	July 5, 1895.	25 ".....	
Maitland, Hants Co.....	Vacant.....			



STATEMENT relating to Wharfs, &c.—Continued.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Nova Scotia—Con.</i>				\$ cts.
Port Maitland, Yarmouth Co.	J. Ellis.....	Dec. 10, 1896.	25 p. c. of collections.....	49 12
Margaretsville .....	C. S. McLean.....	May 7, 1897.	25 " .....	117 15
Meteghan Cove.....	H. E. Robicheau....	" 28, 1897.	25 " .....	24 00
Meteghan River.....	D. D'Entremont....	" 14, 1897.	25 " .....	19 40
Militia Point.....	D. McIntosh.....	Aug. 25, 1892.	25 " .....	
Morden.....	John Redgate....	Nov. 16, 1893.	25 " .....	19 01
Noel.....	Vacant.....			
Northside, Boularderie.....	Dan. McKenzie .....	Nov. 26, 1897.	25 " .....	
Oak Point (Kingsport).....	Rent from Railway Company.....			200 00
Ogilvie .....	R. S. Armstrong....	May 13, 1901.	25 p.c. of collections.....	22 46
Parrsboro'.....	Thompson Tipping..	Nov. 26, 1888.	25 " .....	26 06
Parker's Cove.....	John A. Clark .....	June 26, 1901.	25 " .....	27 78
Pickett's Wharf.....	Freeman Eaton....	Aug. 2, 1899.	25 " .....	61 61
Pictou Island .....	Vacant.....			
Plympton .....	Wm. K. Smith.....	Aug. 8, 1899.	25 " .....	
Port Dufferin, Halifax Co...	H. J. Balcom.....	Feb. 17, 1899.	25 " .....	
Point Brulé.....	Alex. Craig .....	Dec. 26, 1898.	25 " .....	1 16
Port George .....	Guthit Douglas .....	June 26, 1900.	25 " .....	83 84
Port Greville.....	Vacant.....			
Port Hood .....	Albert Macdonnell..	May 22, 1900.	25 " .....	
Port Joli .....	Jos. S. McAdams....	Feb. 5, 1900.	25 " .....	
Port La Tour.....	David Sholds. ....	" 1, 1900.	25 " .....	17 37
Port Lorne.....	Freeman Beardsley..	June 27, 1897.	25 " .....	48 22
Port Morien .....	John McAulay.....	Dec. 10, 1896.	7½ " .....	449 76
Riverside .....	Geo. W. Hawes.....	Mar. 11, 1902.		14 59
Salmon River, Digby Co .....	J. M. Deveau.....	Nov. 29, 1890.	25 p.c. of collections.....	54 07
Saulniersville .....	John T. Saulnier....	Aug. 25, 1888.	25 " .....	
Swims Point .....				21 54
Tancook Island.....	Amos. H. Stevens...	Mar. 11, 1898.	25 p.c. of collections.....	
Tidnish.....	R. A. Smith.....	Sept. 27, 1901.	25 " .....	
Tracadie .....	J. M. Hall.....	Nov. 6, 1888	25 " .....	
Tusket Wedge .....	Vacant.....			
Town Point .....	J. A. Haley.....	Aug. 16, 1901.		3 30
Victoria .....	Amos West.....	Dec. 4, 1900.	25 p.c. of collections.....	13 39
Wallace.....	Vacant .....			
Wallace Harbour, South side.	" .....			
West Pubnico .....	Chas. C. D'Entremont .....	Mar. 28, 1898.	25 p.c. of collections.....	19 87
West River, Sheet Harbour..	Malcolm McFarlane..	Sept. 3, 1889.	25 " .....	
White Point.....	Elisha West .....	Jan. 9, 1889.	25 " .....	
White Waters.....	Jos. Irvine .....	Sept. 27, 1901.	25 " .....	13 94
Whycogomah .....		Oct. 22, 1901.		28 16
Wolfville .....	J. L. Franklin .....			
<i>New Brunswick.</i>				Total.....
Anderson's Hollow.....	W. C. Anderson .....	Feb. 13, 1890.	25 p.c. of collections.....	10 89
Black River .....	Vacant.....		25 " .....	
Buctouche.....	J. J. Leblanc.....	May 2, 1892.	25 " .....	35 66
Campbellton.....	Alfred J. Venner .....	June 10, 1893.	25 " .....	257 87
Cape Tormentine...	E. T. Allen .....	Oct. 20, 1897.	25 " .....	427 42
Clifton, Stonehaven.....	S. Payne .....	Nov. 9, 1894.	25 " .....	
Cocagne .....	H. Bourgeois .....	Aug. 9, 1900.	25 " .....	2 10
Dalhousie.....	W. J. Smith.....	June 27, 1891.	25 " .....	84 70
Egdetts Landing.....	Thos. Barnett.....	July 5, 1895.	25 " .....	20 49
Gardner's Creek .....	Robert Wallace.....	Dec. 11, 1899.	25 " .....	58 30
Hopewell Cape.....	Geo. D. Wilson .....	April 10, 1899.	25 " .....	26 06
Kingston .....	P. Thibodeau.....	Jan. 31, 1901.	25 " .....	
Neguac .....	B. Poirier .....	June 17, 1897.	25 " .....	
Quaco.....	Wellington Vale....	Dec. 19, 1899.	25 " .....	1 23
St. Louis.....	C. Frigand .....	Oct. 29, 1895.	25 " .....	
St. Mary's.....	M. J. S. Leblanc....	Mar. 1, 1897.	25 " .....	
St. Nicholas River, S. Welford	John Grant .....	June 26, 1901.	25 " .....	
Tracadie .....	Prosper Savoy.....	Sept. 23, 1899.	50 " .....	
				Total.....
				924 72



STATEMENT relating to Wharfs, &c.—Concluded.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Prince Edward Island.</i>				\$ cts.
Annandale.....	W. C. Jenkins.....	May 4, 1897.	25 p.c. of collections.....	60 48
Bay View.....	Joseph Harrington..	Oct. 2, 1885.	25 ".....	19 04
Belfast.....	Jas F. Halliday ...	Mar. 1, 1901.	25 ".....	95 33
Brush Wharf, Port Selkirk...	Levi R. Ings.....	Sept. 18, 1885.	25 ".....	106 02
Campbell's Cove.....	Angus McIntyre....	Oct. 17, 1888.	25 ".....	
Chapel Point ... ..	Roland McCormack.	Sep. 18, 1885.	25 ".....	15 90
China Point.....	W. S. N. Crane ....	" 18, 1885.	25 ".....	21 23
Clifton.....	John Gunn.....	May 24, 1900.	25 ".....	
Cranberry, East River.....	James Hughes.....	Mar. 11, 1898.	25 ".....	
Crapaud and Victoria Pier...	E. McKinnon.....	July 7, 1897.	25 ".....	* 237 36
Georgetown.....	James Bourke.....	" 2, 1885.	25 ".....	17 89
Haggerty's Wharf, E. River	M. Burnett.....	Feb. 14, 1898.	25 ".....	
Hickey's Wharf.....	Mark Webster.....	Oct. 22, 1896.	25 ".....	21 75
Higgin's Shore.....	G. G. Henry.....	Nov. 9, 1891.	25 ".....	
Hurd's Point.....	Thos. Montgomery..	Aug. 16, 1901.	25 ".....	51 33
Kier's Shore. ....	W. Hodgson.....	June 10, 1895.	25 ".....	65 89
Lambert.....	Wellington Johnston	May 3, 1900.	25 ".....	
Lewis Point.....	J. G. Scrimigeour...	Oct. 14, 1896.	25 ".....	
McGee's Wharf, Abram's Vill.	Norman Gallant...	Nov. 9, 1891.	25 ".....	
Mink River or Murray Har- bour, North.....	James P. Clow.....	Aug. 25, 1900.	25 ".....	3 96
Murray Harbour, South ....	J. McKinnon. ..	Jan. 27, 1896.	25 ".....	
Nine Mile Creek.....	Edward Harrington.	Oct. 29, 1885.	25 ".....	
North Cardigan.....	Rodk. J. Steele.....	May 1, 1901.	25 ".....	40 61
Pinette.....	Malcolm McLeod...	Jan. 3, 1901.	25 ".....	10 10
Pownal. ....	M. M. Haley.....	Oct. 13, 1896.	25 ".....	66 39
Red Point.....	Arch. Smith.....	Apr. 3, 1900.	25 ".....	14 95
St. Mary's Bay.....	John Dickson.....	Dec. 10, 1896.	25 ".....	12 50
Souris. ....	Angus McDonald,			
South Rustico, Oyster Bed	caretaker.....	Sep. 27, 1894.	25 ".....	
Bridge .....	D. Gallant.....	Feb. 23, 1895.	25 ".....	6 97
Stevens and Montague.....	Well'gt'n A. Johnston	May 3, 1900.	25 ".....	
Sturgeon River.....	Bernard Kearney...	Sep. 18, 1885.	25 ".....	33 53
Tignish.....	A. J. Gaudet.....	Aug. 28, 1898.	25 ".....	5 55
Vernon River.....	W. M. Forbes.....	April 22, 1902.	25 ".....	99 93
Wood Island.....	James Young.....	Apr. 10, 1899.	25 ".....	35 89
Total. ....				1,049 48

RECAPITULATION.

Ontario.....	\$ 3,540 04
Quebec.....	\$2,028.45 less \$92.73, 1,935 72
Nova Scotia.....	4,227 79
New Brunswick.....	924 72
Prince Edward Island.....	1,049 48

Total wharfage dues collected and placed to credit of Receiver General . . . \$ 11,677 75

ADD—Fees received by undermentioned harbour masters in excess of remuneration allowed :—

Harbour Master—St. Johns, Que.....	\$ 213 50
" Sorel .....	39 50
" Canso, N. S. ....	23 50
" Hantsport, N.S.—.....	50 75
" International Pier, N. S .....	319 00
" St. Andrews, N.B.....	1 00
" Chenainus, B. C.....	112 50
" Comox, B. C .....	6 50
" Victoria, B. C.....	113 50
879 75	

Total Revenue from Wharfs and Harbours . . . \$ 12,557 50



APPENDIX No. 10.

STATEMENT of Sick Mariners' Dues collected for the fiscal year ended June 30, 1903.

<i>Quebec.</i>		<i>Nova Scotia—Continued.</i>	
	\$ cts.		\$ cts.
Gaspé . . . . .	146 40	Kentville . . . . .	157 24
Montreal . . . . .	7,745 98	Liverpool . . . . .	141 66
Paspebiac . . . . .	296 60	Lockeport . . . . .	17 72
Percé . . . . .	123 50	Lunenburg . . . . .	523 00
Quebec . . . . .	7,773 58	Middleton . . . . .	3 30
Rimouski . . . . .	138 82	North Sydney . . . . .	975 40
St. Armand . . . . .	25 46	Parrsboro' . . . . .	1,033 46
St. Johns . . . . .	1,405 54	Pictou . . . . .	657 66
Sorel . . . . .		Port Hawkesbury . . . . .	156 51
Stanstead . . . . .	22 22	Port Hood . . . . .	79 68
Three Rivers . . . . .	553 88	Shelburne . . . . .	72 46
Total . . . . .	18,231 98	Sydney . . . . .	4,675 20
		Truro . . . . .	1 94
		Weymouth . . . . .	170 80
		Windsor . . . . .	1,063 62
		Yarmouth . . . . .	612 72
		Total . . . . .	22,573 35
<i>New Brunswick.</i>		<i>Prince Edward Island.</i>	
Bathurst . . . . .	310 90	Charlottetown . . . . .	396 60
Campbellton . . . . .	98 74	Summerside . . . . .	53 44
Chatham . . . . .	1,323 28	Total . . . . .	450 04
Dalhousie . . . . .	674 12		
Moncton . . . . .	1,353 64	<i>British Columbia.</i>	
Newcastle . . . . .	645 98	Nanaimo . . . . .	3,317 68
Sackville . . . . .	199 12	New Westminster . . . . .	90 10
St. John . . . . .	6,466 34	Vancouver . . . . .	2,330 44
St. Stephen . . . . .	102 44	Victoria . . . . .	6,837 00
Total . . . . .	11,174 56	Total . . . . .	12,575 22
		Total . . . . .	65,005 15
<i>Nova Scotia.</i>		LESS—Refunds . . . . .	153 60
Amherst . . . . .	405 46	Grand total . . . . .	64,851 55
Annapolis . . . . .	109 40		
Arichat . . . . .	55 80		
Antigonish . . . . .	4 76		
Baddeck . . . . .	26 30		
Barrington . . . . .	2 22		
Canso . . . . .	187 18		
Digby . . . . .	136 52		
Halifax . . . . .	11,303 34		



## APPENDIX No. II.

## SIGNAL SERVICE.

QUEBEC, November 15, 1903.

As in preceding seasons, reports have been received from the stations in the lower part of the river and gulf, recording the weather, wind, condition, location and movement of the ice during the winter and spring months, and during the season of navigation all inward and outward bound vessels as signalled when passing each station, including the Straits of Belle Isle.

From the 1st to the 20th, of April, three reports per week were obtained and forwarded to the Boards of Trade, Montreal and Quebec, and to the Chamber of Commerce, Halifax, N.S., also to the Press of Montreal and Quebec, to the agent of the Department, Quebec, to the Custom-house and Immigration Agent, to the agents of steamship lines, tug owners, to the pilots for below and above Quebec, also to Messrs. Henry Fry & Co., Lloyds Agents, Québec.

From April 21 reports were received daily and forwarded as above.

The Chief Superintendent of the Quarantine station at Grosse Isle is also supplied with full information as to the weather, wind and the incoming of all transatlantic or foreign vessels.

Information was supplied from the bureau here as in past seasons, to the agents at Anticosti, Magdalen islands, Meat Cove, C.B., Cape Ray and Cape Race, Newfoundland, from April 13 as to weather, wind, movement and condition of the ice in the Gulf and River St. Lawrence up to Montreal, for the guidance of any vessel calling for information.

The Quarantine doctor at Rimouski is also supplied with a report of the incoming mail steamers, name of station and hour of passing being given when vessel was first signalled.

Information as to wind, weather and ice in the vicinity of Anticosti, Magdalen islands, Meat Cove, St. Pauls island and Cape Ray, Newfoundland, is also sent to Point aux Esquimaux in March for the guidance of the sealing fleet.

All reports received of inward bound vessels were repeated to the pilot station at Father Point, so that pilots could be promptly advised of the locality of inward bound vessels.

I have the honor to be, sir,  
Your obedient servant,

J. U. GREGORY,  
*Agent Department of Marine & Fisheries.*



3-4 EDWARD VII., A. 1904

PORT OF HALIFAX, N.S.,

PARTICULARS of Vessels Signalled during

YEAR AND MONTH.	ENGLISH MEN-OF-WAR AND TROOPERS.			FOREIGN MEN-OF-WAR.			STEAMERS, 1ST CLASS.			STEAMERS, 2ND CLASS.		
	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.
1902.												
July. . . . .	2	2	0	0	0	0	36	29	7	54	50	4
August . . . . .	1	1	0	2	2	0	13	13	0	52	52	0
September. . . . .	4	4	0	0	0	0	17	17	0	73	73	0
October. . . . .	0	0	0	0	0	0	20	20	0	54	53	1
November. . . . .	2	2	0	0	0	0	21	21	0	76	64	12
December. . . . .	0	0	0	0	0	0	45	45	0	77	60	17
1903.												
January.. . . .	0	0	0	0	0	0	32	32	0	54	46	8
February. . . . .	0	0	0	1	1	0	28	28	0	51	46	5
March. . . . .	0	0	0	0	0	0	38	38	0	63	55	8
April. . . . .	3	3	0	0	0	0	33	33	0	73	60	13
May. . . . .	4	4	0	0	0	0	26	26	0	71	62	9
June. . . . .	3	3	0	1	1	0	17	17	0	67	63	4
Totals. . . . .	19	19	0	4	4	0	326	319	7	765	684	81

A. E. SHAW, C.S.M.R.E.

CITADEL, October 14, 1903.



SESSIONAL PAPER No. 21

SIGNAL SERVICE.

the Year ending June 30, 1903.

BARQUES.			BARQUENTINES.			BRIGS.			BRIGAN- TINES.			SCHOONERS, 3-MASTED OR BEAR- ING PRIVATE SIGNALS.			MONTHLY TOTALS.		
Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.
4	4	0	1	1	0	0	0	0	0	0	0	0	0	0	97	86	11
2	1	1	4	3	1	0	0	0	1	1	0	0	0	0	75	73	2
1	1	0	0	0	0	0	0	0	2	2	0	0	0	0	97	97	0
0	0	0	0	0	0	0	0	0	1	1	0	8	8	0	83	82	1
4	3	1	1	1	0	0	0	0	0	0	0	0	0	0	104	91	13
3	3	0	1	1	0	1	1	0	0	0	0	0	0	0	127	110	17
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	87	79	8
7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	87	82	5
3	3	0	0	0	0	0	0	0	0	0	0	3	3	0	107	99	8
0	0	0	0	0	0	1	1	0	0	0	0	2	2	0	112	99	13
9	9	0	3	3	0	0	0	0	0	0	0	6	6	0	119	110	9
4	4	4	0	0	0	0	0	0	0	0	0	13	13	0	105	101	4
38	36	2	10	9	1	2	2	0	4	4	0	32	32	0	1200	1109	91

GEORGE BUTLER, L'T. Q'M. R.E.,  
Superintendent of Signals,  
Halifax.



## APPENDIX No. 12.

REPORT OF THE CHAIRMAN OF THE BOARD OF STEAMBOAT  
INSPECTION.

CHAIRMAN'S OFFICE

OTTAWA, November, 1903.

To the Deputy  
Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit the annual report of the operations of the Steamboat Inspection Service for the fiscal year ending June 30, 1903.

It represents the general work of the service during the period mentioned, with the names and number of steamboats inspected in the several divisions, and their gross tonnage, also the amount of tonnage dues and fees collected as known by the inspectors on account of inspection: a statement of the Board meetings held, and the penalties enforced for violations of the Steamboat Inspection Act; the casualties occurring as reported from the several divisions, together with the reports as to the number of vessels lost or unfit for service in the several districts, and the number of vessels added thereto.

In addition to the steamboats inspected at the port of Montreal, the hoisting gear and ships tackle of 436 vessels, used for the purpose of loading and unloading those vessels was also inspected by the steamboat inspectors of that port.

As will be noticed in comparison with former reports, the work of the staff in general has materially increased: in some districts taxing it to the utmost and notably in the West Ontario Division where it has got beyond the reach of the present staff, necessitating an additional appointment to meet the demands of the service.

It is my unpleasant duty to state, that during the past year the service has lost two of its very efficient officers: namely Mr. P. D. Brunelle formerly Hull Inspector for Quebec, who retired owing to his physical condition and advanced age: and Mr. W. L. Waring, Boiler and Machinery Inspector of St. John, N.B., who expired June 1, which is deeply regretted.

The position vacated by Mr. Brunelle has been filled by the appointment of Mr. Philippe Duclos of Sorel: that of Mr. Waring, it not being possible to get an appointment made at the time of his demise, owing to the work of inspection Mr. Esdaile inspector for Halifax with the assistance of Mr. Olive, have kindly exerted themselves to endeavour as far as possible to meet the demands of the service until an appointment could be made.



## SESSIONAL PAPER No. 21

NUMBER of steam vessels reported as known by the inspectors of steamboats in the Dominion, and their gross tonnage, for the year ended June 30, 1903; also the number of vessels inspected, but not registered in the Dominion, for same date.

DIVISION.	Number of Dominion registered steamers.	Gross ton- nage of Dominion registered steamers.	Number of steamers inspected but not registered in the Dominion.	Gross ton- nage of steamers inspected but not registered in the Dominion.
West Ontario . . . . .	450	95,783·60	35	18,052·00
Kingston . . . . .	168	21,030·15	29	2,097·58
Montreal . . . . .	212	24,517·00	1	1,387·00
Quebec . . . . .	162	42,144·00	Nil.	.....
Nova Scotia . . . . .	144	19,854·26	19	27,268·05
New Brunswick and Prince Edward Island . . . . .	126	18,192·44	9	7,785·13
British Columbia and Yukon Territory . . . . .	251	55,084·00	28	31,553·44
Manitoba and North-west Territories . . . . .	120	6,721·66	2	1,500·89
	1,633	283,326·51	123	89,644·09

NUMBER of Dominion registered steam vessels inspected and their gross tonnage, with the amount of dues and fees collected on account of steamboat inspection, during the year ended June 30, 1903.

DIVISION.	Number of Dominion registered steamers inspected.	Gross ton- nage of Dominion registered steamers inspected.	Amount of dues and fees collected on account of steamboat inspection.
			\$ cts.
West Ontario . . . . .	411	95,744·00	7,977 56
Kingston . . . . .	167	21,357·45	2,138 93
Montreal . . . . .	183	23,168·00	1,077 28
Quebec . . . . .	159	41,486·00	1,511 84
Nova Scotia . . . . .	116	15,293·86	3,552 90
New Brunswick and Prince Edward Island . . . . .	104	11,635·13	1,891 04
British Columbia and Yukon Territory . . . . .	246	54,979·64	7,596 13
Manitoba and North-west Territories . . . . .	74	5,579·27	428 24
Inspection of tow-barges . . . . .			140 00
Engineers' certificates . . . . .			935 00
	1,460	269,243·35	27,248 92

## BOARD MEETINGS.

A meeting of a quorum of the Board of Boiler and Machinery inspectors was convened at Toronto, December 11, 1902, for the consideration of a formula to be adopted for arriving at the working pressure to be permitted on the new form of furnace known as the Brown Purvis ribbed and grooved type, when it was decided and recommended to adopt the formula in present use as applied to furnaces of similar description, which would be in unison with the standard as adopted by British Board of Trade for same purpose. Also the rules and regulations as prepared for the proposed new issue were given consideration, and formulas adopted and added thereto, for the strength to be permitted on doubling plates for flat surfaces.



3-4 EDWARD VII., A. 1904

On March 18, 1903. A meeting of a quorum of the Board of Hull inspectors was convened at Quebec for the purpose of examining candidates for the position of Hull Inspector, to fill the vacancy caused by the retirement of Mr. P. D. Brunelle ; at which meeting " Mr. Philippe Duclos " of Sorel passed a satisfactory examination, subsequently being appointed to the position, by Order in Council of May 16, 1903, at a salary of \$1,100 per annum.

A meeting of a quorum of the Board of Boiler and Machinery inspectors was convened at Montreal on May 5, 1903, for the purpose of examining a candidate for the position of boiler and machinery inspector, who failed to pass the examination.

#### PROSECUTIONS WITH PENALTIES ENFORCED FOR VIOLATION OF THE STEAMBOAT INSPECTION ACT.

A complaint having been reported to the department, that the tug *Spray* of Montreal had violated the Steamboat Inspection Act, by carrying passengers without having the necessary certificate for such ; proceedings were taken against the owners for so doing, when they pleaded guilty and paid the fine of \$100 and costs incurred, which was deposited to the credit of the Receiver General, August 15, 1902.

September 29, 1902.—The steamer *Thistle* of Dawson, Y. T., arrived at White Horse with a greater number of passengers than that permitted by her certificate of inspection, and also being short of the equipment as required by her certificate ; which facts were verified by the customs officer and also by the police at the time of their landing ; and being reported as having previously left that port on the 19th inst. under similar conditions, the collector of customs inflicted the full penalty of \$500 for said violation which was deposited to the credit of the Receiver General and vouchers for same received by the department October 29, 1902.

August 25, 1902.—Proceedings were taken against the steamer *Rival* of Kingston for carrying a greater number of passengers than that permitted by her certificate of inspection, to which the owner pleaded guilty, when a penalty of \$100 and costs was inflicted for which the department received the amount of penalty September 10, 1902.

October 10, 1902.—Information was forwarded the department of a collision between the steamers *Argyle* and *Clipper*, both passenger steamers, which occurred on the Lake of the Woods on September 27. The steamer *Argyle* not having the proper officers in charge, proceedings were taken against the owner before the police magistrate at Rat Portage, for violation of the law, when the charge was found to be proven and the defendant was fined a penalty of \$100 and costs, which was received by the department March 11, 1903.

April 8, 1903.—Information having been laid and proceedings taken to prosecute the tug *Vigilant* of Vancouver for carrying passengers without being certificated for that purpose, the case being heard before his honour Judge Henderson who found the defendant guilty, inflicted a fine of \$100 which was received by the department June 17, 1903.

#### CASUALTIES.

The following are the casualties reported from the several districts as having occurred during the fiscal year ending June 30, 1903.

#### WEST ONTARIO DIVISION.

August 4, 1902.—SS. *Seguin* of Owen Sound, collided with the U. S. steamer *City of Venice*, near Rondeau, Lake Erie, the latter steamer sank and three of her crew were drowned, the *Seguin* proceeded to Cleveland, Ohio, with the survivors, where the necessary repairs were made of the damage received by her.

October 5, 1902.—The dredge *Sir Wilfrid* left Toronto for Montreal in tow of the tug *Mary* of Sarnia, when they encountered a severe gale, the dredge sprang a leak and sank, her crew were taken aboard the tug.



## SESSIONAL PAPER No. 21

January 24, 1903.—Steamer *Myles* of Hamilton, laid up for the winter at Toronto, was partially destroyed by fire, the cause of fire is unknown, was thoroughly repaired during the winter.

May 30, 1903.—The walking beam in the steamer *White Star*, of Montreal, broke on her trip in the vicinity of Bronte, Ont. ; the connecting rod destroying a portion of the cabin ; the cylinder and cover was also broken, she was towed to Toronto and repaired, new beam cylinder, and cylinder cover, being provided.

June 1, 1903.—SS. *Orion* of Kingston, while on her trip on Lake Erie the crank pin strap of the engine broke, causing a fracture of the high pressure cylinder, and intermediate head between the high and low pressure cylinder. The steamer was towed to Toronto where the necessary repairs were made.

## EAST ONTARIO DIVISION.

July 18, 1902.—Steamer *Konosha* of Lindsay on a trip from Fenelon Falls to Bobcaygeon, when off Sturgeon point broke her main shaft and engine frame, no person was injured, and steamer was towed to Lindsay for repairs.

October 8, 1902.—Steam-barge *Alberta* of Kingston, whilst lying at Trenton awaiting cargo was totally destroyed by fire, cause unknown, no fatalities.

October 12, 1902.—Steam-barge *Owen* of Chatham on a trip from Wellington to Kingston, was wrecked and went to pieces on the Prince Edward shore. The crew were all saved.

November 20, 1902.—The ss. *Bannockburn* of Montreal, 1,620 gross tonnage, cleared from Fort William for Kingston, laden with wheat, being last sighted by the officers of ss. *Algonquin* on the morning of 21st in a moderate gale of wind on Lake Superior, and has not been heard of since ; the matter is difficult to account for she being of the modern type steel vessel and well built. The cause apparently will never be explained.

*Montreal Division.*

August 22, 1902.—Steamer *Comet* of Ottawa, while under way on Lake Temiscamingue caught fire and was run ashore where she burned to the water's edge becoming a total loss, the flames spread so rapidly that none of the crew could say where the fire originated, or the cause. No fatalities.

May 4, 1903,—Grain elevator St. Lawrence No. 1 while coming up the St. Mary's current into Montreal harbour, took a sheer and struck the corner of the wharf knocking a hole in her bow, when she suddenly sank. Several attempts have been made to raise her, but as yet have not succeeded owing to the strong current. No fatalities.

*Quebec Division.*

April 18, 1903.—The paddle steamer *Kathleen*, of Quebec, while lying in winter quarters, sprang a leak and sank in thirty feet of water whereby she was broken in two, and other damage was done to engine and joiner work. The vessel was raised and found unfit for service.

*Nova Scotia Division.*

No casualties reported as having occurred.

*New Brunswick and Prince Edward Island Division.*

September 25, 1902.—The steamer *Star*, of St. John, while moored at her dock at the north end of St. John, took fire and became a total loss. Cause of fire unknown.

November 30, 1902.—Steamer *Jacques Cartier*, of Charlottetown, on a voyage near Pugwash, was caught in a gale of wind on the north shore of Nova Scotia, and became a total loss ; there was no loss of life.



*Manitoba and North-west Territories.*

November 28, 1902.—Owing to fire caused by the burning of the lumber yard of the Rat Portage Lumber Company, the following named steamers while lying on the marine slip at Norman, in the town of Rat Portage, were burned and became a total loss, viz. : Steamers *Phantom*, *Kennina*, *Spray*, *Princess*, *Pearl*, *Day Star* and *Midge*.

*British Columbia and Yukon Territory.*

October 11, 1902.—SS. *Venture*, of Victoria, B.C., 655 tons, gross tonnage, on a voyage from Naas river, B.C., to Fraser river, struck Hodgins' reefs off Metlakathla, B.C., filled and sank ; was afterwards raised and subsequently towed to Victoria and placed in dock for examination and repairs ; damage, keel gone and planking badly damaged ; boilers displaced, propellers and tail shafts broken ; was thoroughly repaired, and again inspected December 11, previous to going into service.

April 9, 1903.—SS. *Victoria*, of Victoria, B.C., 2,374 tons, gross tonnage ; on a voyage from Puget Sound to Taku, in a dense fog, stranded on Little Bamboo island gulf of Pechilis, north China, becoming a total wreck ; no lives lost ; the master being censured by court of inquiry for not using the lead more frequently.

I am, Sir, your obedient servant,

EDWARD ADAMS,  
*Chairman Board of Steamboat Inspection.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1903.

## WEST ONTARIO DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Snowstorm .....	Tug .....	July 3..	17	6 36	Screw, Toronto Bay.
Winona .....	Pass. ....	" 8..	231	26 48	" Port Stanley and vicinity.
International .....	Car ferry ..	" 9..	851	.....	Twin Screw, Sarnia and Pt. Huron.
Delila .....	Yacht ....	Not issued	4	....	Screw, St. Clair River.
Winslow .....	Tug .....	" ..	353	33 24	" Lakes.
Abino .....	Fish'g Tug ..	July 15..	8	5 64	" Lake Ontario.
Maid of the Mist .....	80 .....	" 15..	62	9 96	" Niagara river.
Hope .....	300 .....	" 16..	170	21 60	" Buffalo and Fort Erie.
Chas. E. Armstrong ..	Tug .....	" 17..	49	8 92	" Welland Canal.
A. D. Cross .....	" .....	" 17..	47	8 76	" ..
Escart .....	" .....	" 17..	40	8 20	" ..
Maggie R. Mitchell ..	" .....	" 17..	40	8 20	" ..
Mary R .....	" .....	" 17..	44	8 52	" ..
Golden City .....	" .....	" 17..	35	7 80	" ..
Augusta .....	" .....	" 18..	57	9 56	" ..
Maggie A. Bennett ..	" .....	" 18..	34	7 72	" ..
F. B. Bradey .....	" .....	" 18..	29	7 32	" ..
Meteor .....	" .....	" 19..	47	8 76	" ..
Nellie Bly .....	Fish'g Tug ..	" 19..	13	6 04	" Lake Ontario.
Alert .....	Tug .....	" 19..	47	8 76	" Welland Canal.
Nautilus .....	Fish'g Tug ..	" 19..	9	5 72	" Lake Ontario.
Nellie H .....	Tug .....	Not issued	25	7 00	" Detroit river.
Scotia .....	Pass. ....	" ..	13	6 04	" ..
W.E.C.U .....	Yacht ....	" ..	6	5 48	" ..
Menew .....	Freight ..	July 25..	109	13 72	" Hudson Bay.
Advance .....	10 .....	Aug. 12..	1,031	90 48	" Duluth and Montreal.
Arctic .....	Freight ..	" 19..	101	13 08	" Lake Ontario.
D. W. Crow .....	Tug .....	Not issued	27	7 16	" Chatham and vicinity.
City of Dresden .....	100 .....	Aug. 22..	194	23 52	" Windsor and Lake Erie.
Frank G. McAulay ..	Tug .....	" 26..	43	8 44	" Lake Huron.
Winnie .....	" .....	" 26..	14	6 12	" ..
Thistle .....	Fish'g Tug ..	" 26..	36	7 88	" ..
A. Chambers .....	" .....	" 27..	23	6 84	" ..
Earl .....	" .....	" 27..	18	6 44	" ..
Mabel M .....	Tug .....	Not issued	7	5 56	" ..
*Mary Arnott .....	" .....	Aug. 27..	8	11 28	" ..
John Logie .....	Fish'g Tug ..	" 28..	37	7 96	" ..
R. H. Dobson .....	" .....	" 28..	44	8 52	" ..
Onward .....	" .....	" 29..	22	6 75	" ..
Jno R. Arnoldi .....	Dredge ...	Not issued	116	14 28	Goderich Harbour.
Huron .....	Tug .....	Aug. 30..	55	9 40	Screw, Lake Huron.
Evelyn .....	Fish'g Tug ..	" 30..	32	7 56	" ..
Sir Wilfrid .....	Dredge ...	Not issued	399	36 92	Foundered on Lake Ont.
W. M. Gorman .....	Fish'g Tug ..	Sept. 9..	28	7 24	Screw, Lake Erie.
The Belle .....	" .....	" 9..	31	7 48	" ..
Belle .....	" .....	" 10..	16	6 28	" ..
Hazard .....	" .....	" 10..	34	7 72	" ..
Eleanor .....	" .....	" 11..	26	7 10	" ..
City of Ladysmith ..	" .....	" 11..	35	7 80	" ..
Wm. Wilson .....	" .....	" 11..	12	5 96	" ..
Lena .....	" .....	" 12..	14	6 12	" ..
Maxie .....	" .....	" 12..	16	6 28	" ..
Electric .....	Yacht ....	" 13..	49	8 92	" Lake Ontario.
Lansdowne .....	210 .....	" 22..	1,571	133 68	Paddle, Windsor and Detroit.
Huron .....	245 .....	" 22..	1,052	92 16	Twin Screw ..
Great Western .....	200 .....	" 24..	1,080	94 40	Paddle ..
**Ranger .....	Tug .....	" 25..	8	16 92	Screw, Detroit river.
City of Mt. Clemens ..	Freight ...	Oct. 7..	102	13 16	" Lakes.
Eagle .....	40 .....	" 7..	12	5 96	" Point Edward and Pt. Huron.
Comfort .....	40 .....	" 8..	14	6 12	" Detroit and St. Clair river.

\*Dues and fees for 1901 and 1902.

\*\*Dues and fees for 1900, 1901 and 1902.



STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Willie Scagel.....	Tug.....	Oct. 9..	22	6 76	Screw, Wallaceburg and vicinity.
Louisa.....	Yacht.....	Not issued	13	6 04	" "
Harry Sewell.....	Tug.....	Oct. 10..	25	7 00	" "
E. G. Ashley.....	" .....	Not issued	10	5 80	" "
Eima.....	Tug.....	Not issued	6	5 48	" Chatham and vicinity.
Gordon Brown.. ..	Fish'g Tug	Nov. 18..	33	7 64	" Lake Erie.
Enterprise.....	" .....	" 19..	18	6 44	" "
Uncle Tom.....	" .....	" 17..	8	5 72	" "
Jubilee.....	" .....	" 20..	10	5 80	" "
Swan .....	" .....	" 20..	14	6 12	" "
May B.. ..	" .....	" 20..	10	5 80	" "
		1904.			
Lakeside... ..	524	March 16..	348	35 84	" Lake Ontario.
Macassa .....	616	" 21..	459	44 72	Twin screw, Hamilton and Toronto.
Ontario... ..	500	" 25..	1,615	137 20	Paddle, Windsor and Detroit.
Michigan.....	500	" 25..	1,730	146 40	" " "
Walter H. Stone.....	Fish'g Tug	" 26..	35	7 80	Screw, Lake Erie.
Melbourne.....	125	April 2..	894		" Toledo and Montreal.
Erin .....	Freight...	" 2..	651	57 08	" All lakes and rivers.
Seguin.....	20	" 3..	818	73 44	" Quebec and Duluth.
Iroquois.....	10	" 6..	2,359	196 72	" Prescott and Duluth.
Dan'l Lamb .....	Dredge...	" 6..	253	25 24	Toronto Harbor.
Acacia.....	Freight...	" 9..	107	16 54	Screw, Lake Ontario.
Arabian... ..	12	" 9..	1,073	93 81	" Quebec and Duluth.
Lillie Smith .....	Freight...	Not issued	275	27 00	" " "
Monarch.....	345	April 11..	2,017	169 36	" Windsor "
Huronic.....	563	" 11..	3,330	274 40	" " "
United Empire.. ..	357	" 13..	1,961	164 88	" " "
Manitou.....	254	" 15..	470	45 60	" Lake Huron and Georgian Bay.
Persia.....	150	" 17..	757	68 56	" Montreal and Hamilton.
Ocean.....	125	" 17..	684	62 72	" " and Sarnia.
Cuba .....	125	" 17..	931	82 48	" " "
Orion.....	Freight...	" 20..	846	72 68	" All lakes and rivers.
Myles.....	" .....	" 20..	1,199		" " "
Tecumseh .....	" .....	" 21..	840	72 20	" " "
Winona.....	230	" 22..	231	26 48	" Lake Erie and vicinity.
Spartan .....	400	" 27..	946		Paddle, Montreal and Hamilton.
Corsican.....	400	" 27..	946		" " "
Clark Bros.....	200	" 27..	92	12 36	Screw, Hamilton and Whitby.
Lake Michigan. ....	Freight...	May 2..	573		" All lakes and rivers.
Chicora.....	872	" 4..	931		Paddle, Lake Ontario.
Chippewa .....	2,000	" 4..	1,514		" "
Corona.....	1,000	" 4..	1,274		" "
Ongiara .....	244	" 5..	98		Screw, Niagara River.
Mazeppa .....	Pass....	Not issued	146		" Port Arthur and vicinity.
Norseman.....	Freight...	May 11..	620		" Duluth and Prescott.
Balize.....	Tug.....	" 14..	250		" Lakes.
City of Chatham .....	627	" 14..	341	35 28	" Chatham and Detroit.
Primrose.....	900	" 15..	189		Paddle, Toronto Bay.
Luella.....	110	" 15..	38		Screw "
Mayflower.....	900	" 15..	189		Paddle "
Shamrock.....	412	" 15..	154		" "
Ada Alice.....	125	" 15..	60		Screw "
Modjeska .....	801	" 16..	678	62 24	Twin screw, Toronto and Hamilton.
Island Queen.....	140	" 18..	23		Screw, Toronto Bay.
Toronto .....	1,000	" 18..	2,779		Paddle, Toronto and Prescott.
Ojibway.....	460	" 18..	194		Screw, Point Iroquois and Killarney.
Kingston.....	1,000	" 18..	2,925		Paddle, Toronto and Prescott.
White Star.....	Pass....	Not issued	451		" Lake Ontario.
Garden City { Coasting Lake. ....	760 514	May 20..	637		" "



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1904.		\$ cts.	
Cleopatra.....	Yacht....	May 23..	104	.....	Screw, Lake Huron.
Pappoose.....	168	" 29..	57	.....	" Detroit River.
Lincoln { Coasting	496	" 29..	337	.....	" Sarnia and lake Erie ports.
{ Lake. . .	354				
Simla.....	Freight...	June 1..	1,490	.....	" Lakes and rivers.
Kathleen.....	220	" 9..	110	.....	" Toronto Bay.
Boscobel.....	Tug....	Not issued	617	.....	" Lakes.
Tepiakam.....	Fish'g Tug	June 13..	29	.....	" Lake Huron.
Sarnia.....	Tug ....	" 15..	85	.....	" "
Argyle.....	" .....	Not issued	41	.....	" "
Florence.....	Tug.....	June 15..	113	.....	" "
Ariadne .....	Fish'g tug	" 16..	38	.....	" "
B. W. Aldrich.....	Tug.....	" 16..	41	.....	" "
Hiawatha .....	300	" 17..	163	.....	" St. Clair and Detroit Rivers.
Juno .....	Freight...	Not issued	288	.....	" Lakes and Rivers.
Hiawatha.....	Yacht....	June 19..	46	.....	" Toronto Bay.
Sagnian .....	Tug.....	" 25..	357	.....	" Lakes.
Pittsburg.....	500	" 26..	1,349	.....	Paddle, Buffalo and Soo.
Lurline.....	Yacht....	" 26..	66	.....	Screw, Detroit Rivers.
Lansdowne.....	Car ferry.	Not issued	1,571	.....	Paddle, Windsor and Detroit.
Arlington. ....	Pass .....	"	23	.....	Screw, Toronto Bay.
Total.....			55,672	3,030 95	

JOHN DODDS,  
Steamboat Inspector.



STEAM Vessels Inspected in Canada but Registered elsewhere for the Year ended  
June 30, 1903.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Grace Donner.....	200	July 10..	66	.....	Screw, Sarnia and Port Huron.
Harley.....	25	" 11..	24	.....	" Marysville and Stag Island.
Luna.....	450	" 22..	143	.....	" Detroit River.
Hattie.....	200	" 22..	67	.....	" "
Fortune.....	502	Aug. 4..	200	.....	" Point Iroquois and Thessalon.
Louise.....		Not issued	84	.....	" Lake Erie.
Victoria.....	250	Sept. 16..	192	.....	" Windsor and Detroit.
Michigan Central.....	281	" 16..	1,522	.....	Paddle "
Transfer.....	233	" 17..	1,511	.....	" "
Transport.....	256	" 19..	1,595	.....	" "
Welcome.....	266	Oct. 8..	213	.....	Screw, Detroit River.
Niagara.....	349	Dec. 3..	213	.....	" Buffalo and Fort Erie.
Ariel.....	226	" 9..	202	.....	" Walkerville and Detroit.
Omar D. Conger.....	575	" 30..	196	.....	" Detroit River.
		1904.			
Shenango No. 1.....	950	Mar. 6..	1,942	163 36	(3) Screws, Lakes and Rivers.
City of Toledo.....		Not issued	1,004	88 32	Paddle, Detroit River.
Garland.....		"	248	27 84	Screw "
Sappho.....		"	224	25 92	" "
Promise.....		"	473	45 84	" "
Excelsior.....		"	229	26 32	" "
Pleasure.....		"	490	47 20	" "
Grace Donner.....		"	66	.....	" Sarnia and Port Huron.
Wyandotte.....	904	May 12..	320	33 60	" Detroit River.
Frank E. Kirby...	975	" 13..	533	50 64	Paddle, Lake Erie and Detroit River.
Arundell.....		Not issued	339	35 12	Screw, Lakes and Rivers.
Darius Cole.....	1,088	May 27..	538	51 06	Paddle, Buffalo and Crystal Beach.
Tashmoo.....		Not issued	1,345	115 52	" Detroit River.
Greyhound.....		"	1,392	119 36	" "
Columbia.....		"	969	85 44	Screw "
Idlewild.....	800	May 28..	363	37 07	Paddle, Buffalo and Crystal Beach.
Owana.....	1,066	" 29..	747	67 76	" Detroit River.
James Beard.....		Not issued	87	.....	Screw, Sarnia and Port Huron.
Hattie.....	200	June 25..	67	10 36	" " Detroit.
Total.....			17,604	1,030 73	

JOHN DODDS,  
Steamboat Inspector.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1903.

## WEST ONTARIO DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Hackett.....	Dredge...	Not issued	96	12 68	Dredge, Penetang Harbour.
Maud.....	40	July 1..	40	8 20	Screw, Penetang and Point aux Baril.
W. J. Strong.....	Tug.....	" 1..	41	8 28	" " Harbour.
Shawanaga.....	" .....	" 2..	96	12 68	" Georgian Bay.
Topsy yacht.....	" .....	" 2..	9	5 72	" "
Torpedo.....	" .....	Not issued	8	5 64	" "
Odessa yacht.....	" .....	July 2..	12	5 96	" "
Mayflower.....	35	" 2..	26	7 08	" Waubaushene and Point aux Baril.
J. C. Else.....	Tug.....	" 3..	33	7 64	Paddle " vicinity.
Eagle.....	" .....	Not issued	10	5 80	Screw, Georgian Bay.
Waubauskene.....	" .....	July 3..	97	12 76	" "
Stilletto.....	20	" 3..	14	6 12	" Waubaushene and Moose Point.
Lillian.....	Tug.. ..	" 4..	5	5 40	" Georgian Bay.
Conqueror.....	" .....	" 4..	25	7 00	" "
Sea Gull.....	" .....	" 4..	9	5 72	" "
Bruce.....	" .....	" 4..	16	6 28	" "
Lady of the Lake.....	Freight ..	Not issued	47	8 76	" "
Venetta.....	Yacht....	July 11..	31	7 48	" "
Viola.....	" .....	" 11..	68	10 44	" "
Canada.....	512	" 12..	312	32 96	" " and vicinity.
J. H. Jones.....	250	" 12..	152	20 24	" " Lake Huron.
Myron B.....	Yacht....	Not issued	.....	.....	" Little Current and vicinity.
*R. C. Britton.....	Freight ..	July 17..	213	44 08	" Duluth and Prescott.
United Lumbermen...	" .....	" 17..	399	36 92	" " Quebec.
Edna.....	110	" 18..	55	9 40	" Penetang and Point aux Baril.
Bertha.....	36	" 18..	18	6 44	" "
Bobs.....	40	" 18..	38	8 04	" "
Lorna Doone.....	26	" 19..	26	7 08	" Point aux Baril and Moon River.
Geraldine.....	40	" 19..	65	10 28	" Penetang and Point aux Baril.
Marie.....	Tug.....	" 19..	12	5 96	" Parry Sound and vicinity.
Pearl.....	21	" 19..	6	5 48	" Mill Lake.
Emma.....	250	" 21..	146	19 68	" Penetang and Point aux Baril.
Pilot.....	Tug.....	" 21..	70	10 60	" Georgian Bay.
Carlton.....	" .....	" 21..	8	5 64	" "
†Albani.....	Yacht....	" 21..	5	16 20	" "
Maggie May.....	Fish'gtug.	" 22..	46	8 68	" "
Herold Gauthier.....	" .....	Not issued	9	5 72	" "
Jas. Playfair.....	" .....	" .....	26	7 08	" "
Primrose.....	" .....	July 23..	23	6 84	" "
W. S. Oldfield.....	Tug.....	Not issued	15	6 20	" "
Ophir.....	Yacht....	July 24..	11	5 88	" "
Halero.....	" .....	" 24..	8	5 64	" "
Dorothe.....	" .....	" 24..	8	5 64	" "
Onagonah.....	" .....	" 26..	19	6 52	" Muskoka Lakes.
Charlie M.....	32	" 28..	50	9 00	" "
Jennie Wilson.....	Tug.....	" 28..	7	5 56	" "
Ontario.....	" .....	" 28..	11	5 88	" "
Llano.....	Yacht....	Not issued	14	6 12	" "
Rosseau.....	Tug.....	" .....	53	9 24	" "
Kestrel.....	Yacht....	July 29..	7	5 56	" "
Queen of the Isles....	Tug.....	" 29..	40	8 20	" "
Wapenao.....	Yacht....	" 29..	5	5 40	" "
Fidelia.....	" .....	" 29..	9	5 72	" "
Theresa.....	Tug.....	" 30..	26	7 08	" "
Iagara.....	Yacht....	" 30..	7	5 56	" "
Secret.....	" .....	" 30..	9	5 72	" "
Kacymo.....	" .....	" 30..	9	5 72	" "
Ethel May.....	Tug.....	" 30..	13	6 04	" "
Devenish.....	Yacht....	" 31..	3	5 24	" "
Islander.....	107	" 31..	165	21 20	" "

\* Dues and fees for 1901 and 1902.

† Dues and fees for 1900, 1901 and 1902.



STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY -Continued.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Florence Main.....	100	July 31..	79	11 32	Screw, Muskoka Lakes.
Ina .....	Yacht....	" 31..	14	6 12	" "
Manolia .....	" .....	" 31..	6	5 48	" "
Flyer.....	18	Aug. 1..	4	5 32	" "
Allena May.....	Tug.....	" 1..	16	6 28	" "
Puritan.....	Yacht....	" 1..	6	5 48	" "
Niska.....	" .....	" 2..	9	5 72	" "
C. W. Chamberlain....	Freight...	" 7..	385	35 80	" all Lakes and Rivers.
Maggie McLean ..	Tug.....	" 12..	37	7 96	" French River.
S. R. Norcross.....	" .....	" 13..	20	6 60	" " "
Evelyn .....	" .....	" 14..	85	11 80	" Georgian Bay.
Coponaning.....	" .....	" 14..	18	6 44	" French River.
Ottawa.....	8	" 18..	2431	202 48	" Quebec, Duluth and Chicago.
Minnette.....	Yacht....	Not issued	4	5 32	" Lake of Bays.
Equal Rights .....	" .....	Aug. 22..	6	5 48	" " "
Dolly Gray .....	" .....	Not issued	5	5 40	" " "
Phoenix.....	Tug.....	Aug. 23..	29	7 32	" Huntsville and vicinity.
Empress Victoria.....	100	" 23..	106	16 48	" " "
Joe.....	40	" 23..	57	9 56	" " "
Lady of the Lake. ....	Tug.....	" 25..	10	5 80	" Lake of Bays.
Mary Louise.....	40	" 25..	64	10 12	" " "
Gem .....	40	" 25..	9	5 72	" Huntsville and vicinity.
Wanda.....	Yacht....	" 26..	12	5 96	" Muskoka Lakes.
Osso.....	" .....	" 27..	6	5 45	" " "
Algoma.....	" .....	" 27..	5	5 40	" " "
Lady of the Lake.....	" .....	" 28..	7	5 56	" " "
Bella Vista....	" .....	" 28..	5	5 40	" " "
Sky Pilot.....	" .....	Not issued	5	...	" " "
Anchora.....	" .....	Aug. 28..	6	5 48	" " "
Glad Tidings.....	10	" 30..	10	5 80	" Sparrow Lake
Lady Franklin .....	20	" 30..	5	5 40	" " "
Ella.....	40	" 30..	15	6 20	" Simcoe and Couchiching Lakes.
Agnes .....	Pass.....	Not issued	14	6 12	" Roaches Point and Belle Ewart.
Minota .....	Yacht....	Sept. 2..	29	7 32	" Simcoe and Couchiching Lakes.
Annie C. Hill.....	" .....	" 2..	14	6 12	" " "
City of Windsor.....	207	" 2..	511	48 88	" Collingwood and Sault Ste. Marie.
City of Owen Sound...	250	" 20..	754	68 32	" Paddle, Collingwood and Sault Ste. Marie.
J. V. O'Brien.....	Pass.....	Not issued	59	9 72	" Screw, Killarney and Collingwood.
Gertie C.....	Tug.....	Sept. 24..	15	6 20	" Georgian Bay.
Lizzie May.....	Fish'g tug	Oct. 8..	18	6 44	" Lake Huron.
Osprey.....	" .....	" 9..	42	8 36	" " "
Edna Ivan.....	10	" 9..	54	9 32	" Little Current & Cockburn Island.
John McKay. ....	Fish'g tug	Not issued	34	7 72	" Lake Huron.
Elite.....	" .....	" .....	22	6 76	" " "
Vixen.....	" .....	Oct. 10..	68	10 44	" " "
Algoma.....	650	" 13..	157	20 56	" Pointe Iroquois and Bruce Mines.
W. A. Rooth.....	Tug.....	" 13..	52	9 16	" Sault Ste. Marie and vicinity.
Glyn .....	" .....	" 14..	20	6 60	" Sault Ste. Marie River.
J. L. Beckwith. ....	" .....	Not issued	61	9 88	" " " "
Iota.....	" .....	Oct. 15..	6	5 48	" " " "
W. J. Smith.....	" .....	" 17..	26	7 03	" " " "
E. P. Sawyer.....	" .....	" 17..	52	9 16	" " " "
Bertha Endress. ....	" .....	" 18..	32	7 56	" " " "
Killarney Belle.....	" .....	Not issued	28	7 24	" North Channel.
N. Dymont.....	" .....	" .....	59	9 72	" Twin screw, North Channel.
Viper.....	" .....	" .....	34	7 72	" Screw, North Channel.
Annie Moiles.....	25	Oct. 21..	71	10 68	" Killarney and Sault Ste. Marie.
Jas. McKeon.....	Tug.....	Not issued	36	7 88	" Blind River and vicinity.
Espanola.....	21	Oct. 22..	7	5 56	" Spanish River and vicinity.
Fanny Arnold.....	31	" 23..	73	10 84	" Killarney and Sault Ste. Marie.
P. S. Heidsordt. ....	Tug.....	" 23..	45	8 60	" North Channel
Stella.....	Fish'g tug	" 23..	16	6 28	" " "
Albert Wright....	12	" 23..	29	7 32	" Thessalon and Little Current.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Surprise.....	Fish'g tug	Oct. 24..	19	6 52	Screw, North Channel.
Scotch Thistle....	27	" 25..	17	6 36	" Killarney and Blind River
Myron B.....	Yacht....	Not issued			" Little Current and vicinity.
E. Blake.....	Tug.....	Oct. 27..	22	6 76	" North Channel
Fred Davidson.....	40	" 27..	43	8 44	" Killarney and Sault Ste. Marie.
* Ethel.....	Fish'g tug	Not issued	13	12 08	" North Channel.
Everard.....	"	Oct. 28..	25	7 00	" "
J. G. Gidley.....	20	" 28..	57	9 56	" Killarney and Sault Ste. Marie.
Lillie.....	Tug.....	" 28..	50	9 00	" North Channel.
Welcome.....	"	Not issued	21	6 68	" "
Gypsy.....	10	Oct. 31..	11	5 88	" Killarney and Sault Ste. Marie.
Cynthia.....	Fish'g tug	Nov. 1..	35	7 80	" Georgian Bay.
Molly S.....	29	" 1..	45	8 60	" Killarney and Sault Ste. Marie.
Magnolia.....	Tug.....	Dec. 2..	367	34 36	" Georgian Bay.
Metamora.....	"	" 2..	239	24 12	" "
Margherita.....	Yacht....	" 2..	31	7 48	" "
Menodora.....	Tug.....	Not issued	73	10 84	" "
Minitaga.....	"	Dec. 3..	73	10 84	" "
Reginald.....	"	" 5..	186	19 88	" "
		1904.			
Rosedale.....	8	Mar. 21..	1,507	128 56	" Duluth and Prescott.
Algonquin.....	13	" 21..	1,806	152 48	" " "
Annie M.....	Fish'g tug	" 26..	33	7 64	" Georgian Bay.
Orcadia.....	"	" 26..	26	7 08	" "
Alice G.....	"	" 26..	36	7 88	" "
Dalton McCarthy.....	"	" 26..	54	9 32	" "
Beatrice M.....	"	" 26..	36	7 88	" "
Severn.....	Tug.....	No sued	44	8 52	" Collingwood Harbour.
Midland Queen.....	18	Mar. 28..	1,993	167 44	" Duluth and Prescott.
Minnie M.....	(468 L. ) (598 R. )	April 1..	613	57 04	" Toledo and Sault Ste. Marie.
King Edward.....	337	" 1..	571	53 68	Paddle, " "
H. R. Dixon.....	300	" 1..	483	46 64	Screw, Peninsular, Harbour & Collingwood
Ossifrage.....	(447 L. ) (550 R. )	" 2..	632	58 56	" Michipicoten and Sault Ste. Marie
Harold B. Phillips.....	Tug.....	" 2..	66	10 28	" Sault Ste. Marie and vicinity.
Philadelphia.....	40	" 3..	148	19 84	" Montreal and Duluth.
C. E. Ainsworth.....	Fish'g tug	" 3..	76	11 08	" Lake Superior.
Captain Jim.....	"	" 3..	58	9 64	" "
General Weitzel....	Tug.....	" 4..	32	7 56	" Sault Ste. Marie and vicinity.
Commodore.....	"	April 4..	40	8 20	" "
W. J. Emerson.....	Fish'g tug	" 4..	28	7 24	" Lake Superior.
Imperial.....	Tug.....	" 4..	36	7 88	" Sault Ste. Marie and vicinity.
Gordon Gauthier.....	Fish'g tug	" 4..	26	7 08	" Lake Superior.
R. A. McLean.....	Tug.....	" 4..	30	7 40	" Sault Ste. Marie and vicinity.
Telegram.....	200	" 6..	198	23 84	" Collingwood and Sault Ste. Marie.
Majestic.....	631	" 8..	1,578	134 24	" Fort William and Windsor.
Germanic.....	502	" 8..	1,014	89 12	" Collingwood and Duluth.
City of Collingwood..	364	" 8..	1,387	118 96	" " "
City of Midland.....	385	" 8..	974	85 92	" Collingwood and Sault Ste. Marie.
Athabasca.....	500	" 9..	2,269	189 52	" Owen Sound and Fort William.
Manitoba.....	500	" 9..	2,616	217 28	" " "
Atlantic.....	300	" 9..	683	62 64	" Collingwood and Sault Ste. Marie.
Harrison.....	Tug.....	" 9..	150	17 00	" Georgian Bay.
Thomas Maitland.....	"	" 9..	107	13 56	" "
Agnes.....	"	" 10..	23	6 84	" "
Alberta.....	500	" 11..	2,282	190 56	" Owen Sound and Fort William.
Arbutus.....	Tug.....	Not issued	49	8 92	" Georgian Bay.
R. J. Morrell.....	Fish'g tug	April 13..	40	8 20	" "

\* Dues and fees for 1901 and 1902.



STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and inspection Fees Paid.	Class of Vessel and where employed.
		1904.		\$    cts.	
Primrose .....	Fish'g tug	April 13..	23	6 84	Screw, Georgian Bay.
Jas. Playfair. ....	"	Not issued	26	7 08	" "
Maggie May .....	"	April 13..	46	8 68	" "
Laura M. ....	"	Not issued	18	6 44	" "
Onaping .....	Tug .....	April 14..	256	25 48	" "
City of Toronto .....	394	" 14..	782	70 56	Paddle, Penetang and Sault Ste. Marie.
Britannic .....	273	" 14..	428	42 24	" Collingwood and Sault Ste. Marie.
B. M. Fraser .....	Tug .....	" 14..	50	9 00	Screw, Georgian Bay.
D. R. Van Allen .....	Freight ..	" 15..	318	30 44	" Duluth and Montreal.
Traveler .....	Tug .....	Not issued	438	40 04	" Georgian Bay.
Dredge No. 9 .....	Dredge...	April 23..	187	19 96	Dredge, Midland Harbour.
Rover .....	Tug .....	" 23..	51	9 08	Screw, "
Caroline .....	"	Not issued	12		" Georgian Bay.
Lilly .....	"	Apr. 24	22	6 76	" Victoria Harbour.
Charlton .....	"	May 4..	389	36 12	" Georgian Bay.
J. V. O'Brien .....	25	Apr. 28..	59	9 72	" " "
Heather Belle .....	Fish'g tug.	" 28..	20	6 60	" " "
James Norris .....	Tug .....	" 28..	50	9 00	" " "
W. H. Seymour .....	"	May 7..	85		" " "
Shamrock .....	Fish'g tug.	Not issued	14		" Lake Superior.
Tecumseh .....	Tug .....	"	10		" North Channel.
Dolphin .....	"	May 14..	24		" Lake Huron.
Saucy Jim .....	"	" 21..	93		" Georgian Bay.
Dredge Frank .....	Dredge...	" 22..	185		Dredge, Owen Sound.
Port Elgin Queen .....	Tug .....	" 22..	37		Screw, " "
Ripple .....	"	Not issued	15		" Georgian Bay.
Sandford .....	"	May 26..	56		" " "
W. E. Gladstone .....	"	" 26..	59		" " "
Annie Siemon .....	"	" 27..	19		" " "
Mills .....	Fish'g tug.	Not issued	11		" Manitou Lake.
J. H. Jones .....	Pass .....	"	152		" Georgian Bay and Lake Huron.
Clucas .....	Fish'g tug.	June 4..	28		" Lake Huron.
John Haggart .....	235	" 8..	202		" Bruce Mines and Sault Ste. Marie.
Ripple .....	Tug .....	Not issued	5		" Sault Ste. Marie River.
Islander .....	"	"	6		" " " "
Ahmic .....	40	June 17..	43		" Muskoka Lakes.
Priscilla .....	Yacht .....	" 17..	20		" " "
Comet .....	Tug .....	" 17..	20		" " "
Charlie M .....	32	" 17..	50		" " "
Medora .....	360	" 18..	377		" " "
Islander .....	107	" 18..	165		" " "
Queen of the Isles .....	Tug .....	" 18..	40		" " "
Constance .....	40	" 18..	52		" " "
City of Bala .....	Tug .....	" 18..	74		" " "
Bertha May .....	"	" 18..	20		" " "
Muskoka .....	301	" 18..	197		" " "
Nipissing .....	Pass .....	Not issued	275		Paddle, " "
Niska .....	Yacht .....	June 19..	9		Screw, " "
Mink .....	40	" 19..	56		" " "
Gravenhurst .....	Tug .....	" 19..	29		" " "
Nymph .....	40	" 19..	29		" " "
Kenozha .....	289	" 19..	225		" " "
Nymoca .....	Tug .....	" 19..	25		" " "
Wanita .....	109	" 20..	44		" Burks Falls and Ahmic Harbour.
Emulator .....	Tug .....	Not issued	25		" " and vicinity.
Glenrosa .....	"	June 20..	63		" Maganetawan River.
Wenonah .....	102	" 20..	161		Pad. and scr., Burks Falls and Ahmic Harb
Lorna Doone .....	Yacht...	" 22..	5		Screw, Orillia and vicinity.
Soncil .....	"	" 22..	14		" " "
Islay .....	348	" 22..	175		" Lake Simcoe and Tributaries.
Longford .....	150	" 22..	53		" " "
Ella .....	40	" 22..	15		" " "
Dredge Simcoe .....	Dredge ..	Not issued			Dredge, "



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*BOILERS AND MACHINERY —*Concluded.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1904.					
Lake.....	Tug .....	Dredge...	13	.....	Screw, Lake Simcoe and Tributaries.
J. C. Else.....	" .....	June 23..	33	.....	Paddle, Waubauskene and vicinity.
Eagle.....	" .....	" 23..	10	.....	Screw, Georgian Bay.
City Queen.....	40	" 24..	69	.....	" Penetang and Point aux Baril.
Stilletto.....	Pass.....	Not issued	14	.....	" Midland Harbour and vicinity.
Creole .....	Tug.....	June 24..	21	.....	" Georgian Bay.
Clipper.....	" .....	Not issued	46	.....	" " "
United Lumermen...	Freight..	" .....	399	.....	" Duluth and Quebec.
Voyageur.....	Yacht....	June 25..	44	.....	" Georgian Bay.
Mayflower.....	Pass.....	Not issued	26	.....	" Waubauskene and Point aux Baril.
D. L. White.....	Tug.....	June 26..	56	.....	" Georgian Bay.
Masonic.....	38	" 26..	39	.....	" Penetang and Point aux Baril.
Mabel, G.....	Yacht....	" 27..	10	.....	" Georgian Bay.
Torpedo.....	Tug.....	" 27..	8	.....	" " "
Penetang.....	15	" 27..	102	.....	" Penetang and Byng Inlet.
John Lee, sr... {	200 Lake.. {	" 27..	88	.....	" Collingwood and Penetang.
	291 Coast'g }				
Home Rule.....	Yacht....	" 27..	3	.....	" Georgian Bay.
Dredge Hackett.....	Dredge....	" 29..	96	.....	Dredge, Penetang Harbour.
W. J. Strong.....	Tug.....	" 29..	41	.....	Screw " "
Waubauskene .....	" .....	" 29..	97	.....	" Georgian Bay.
Minnicog.....	40	" 29..	35	.....	" Penetang and Pointe aux Baril.
Sweet Mary.....	Tug.....	" 29..	13	.....	" Georgian Bay.
Odessa Yacht.....	Pass.....	Not issued	12	.....	" Honey Harbour and vicinity.
Beaver.....	Tug.....	June 29..	29	.....	" Georgian Bay.
Maud.....	28	" 29..	40	.....	" Penetang and Pointe aux Baril.
Topsy Yacht.....	Pass.....	Not issued	9	.....	" Penetang and vicinity.
Lilly May.....	Tug.....	" .....	10	.....	" Georgian Bay.
Lillian.....	" .....	June 30..	5	.....	" " "
C. W. Chamberlain...	Freight...	Not issued	385	.....	" All Lakes and Rivers.
Shawanaga.....	Tug.....	June 30..	96	.....	" Georgian Bay.
Total.....			400 72	\$3,883 56	

## STEAM Vessels Inspected in Canada but registered elsewhere for the year ended June 30, 1903.—West Ontario Division.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1903.					
International .....	300	Oct. 15..	144	.....	Screw, Bay Mills & Thessalon.
1904.					
Benton .....	20	May 9..	304	32 32	" Buffalo & Fort William.
Total.....			448	\$32 32	

E. W. McKEAN.

Steamboat Inspector.

Toronto, Ont.



STEAM Vessels not Inspected for the Year ended June 30, 1903.

WEST ONTARIO.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.	
			Why not Inspected and Class of Vessel.	
St. George . . . . .	21	14	Screw, tug.	Inspected since June 30, 1903.
John Hanlan . . . . .	37	25	" passenger.	
Gordon Jerry . . . . .	124	84	" freight.	
Oriole . . . . .	75	48	" passenger.	
Rambler . . . . .	6	4	" tug.	
Sea King . . . . .	26	17	" fishing tug.	
W. H. Siebold . . . . .	22	15	" "	
Helen S . . . . .	86	58	" "	
James Storey . . . . .	49	33	" "	
Hugh S . . . . .	24	16	" "	
Southwood . . . . .	19	13	" "	No application.
Enterprise . . . . .	148	99	Twin screw, passenger.	
Naiad . . . . .	29	20	Screw, yacht.	
Sarah E. Day . . . . .	5	4	" tug.	
T. J. Collop . . . . .	63	42	" freight.	
Reliance . . . . .	311	182	" tug.	
Home Rule . . . . .	81	45	" "	
Florence M . . . . .	8	6	" "	
Kate Murray . . . . .	3	2	" "	
G. P. McIntosh . . . . .	58	41	" fishing tug.	
Juno . . . . .	28	19	" "	Not running.
Sea Gull . . . . .	19	13	" tug.	
Pauline Hickler . . . . .	50	34	" "	
Dispatch . . . . .	33	22	" "	
W. L. Davis . . . . .	46	37	" "	
S. Kneeland . . . . .	46	29	" "	
Signal . . . . .	94	64	" "	
J. H. McDonald . . . . .	41	28	" "	
F. A. Hodgson . . . . .	46	29	" "	
A. Seamen . . . . .	76	52	" "	
Joe Milton . . . . .	93	63	" passenger.	
John J. Noble . . . . .	33	23	" fishing tug.	
C. M. Bowman . . . . .	88	60	" tug.	
Roy . . . . .	6	4	" yacht.	
Vick . . . . .	13	9	" tug.	
M. G. McDonald . . . . .	29	20	" fishing tug.	
Glenora . . . . .	17	10	" "	
John William . . . . .	14	10	" tug.	
Cecebe . . . . .	11	8	" "	
Clara Hickler . . . . .	42	32	" "	
Sonntag . . . . .	7	5	" yacht.	
Agnes C . . . . .	20	10	" tug.	
Yacht Maida . . . . .	2	2	" "	
Ida Bell . . . . .	6	3	" "	
Nina . . . . .	11	9	" "	
Adrelexa . . . . .	15	10	" passenger.	
Advance . . . . .	72	49	" tug.	
Tempest . . . . .	21	14	" "	
Thistle . . . . .	78	70	Paddle, passenger.	
Cruiser . . . . .	55	24	Screw, yacht.	
Urania . . . . .	898	424	Paddle, passenger.	
Morning Star . . . . .	5	3	Screw, tug.	
Sea Queen . . . . .	18	12	" fishing tug.	
Mizpah . . . . .	18	12	" yacht.	
Una . . . . .	22	15	" "	
Herbert M . . . . .	26	18	" tug.	
Ella Taylor . . . . .	34	23	" "	
Island Belle . . . . .	31	21	" "	
Siesta . . . . .	3	2	" "	
Ida . . . . .	21	6	" yacht.	
Ocean Lily . . . . .	3	2	" tug.	
J. C. Clark . . . . .	145	99	" passenger.	
Camilla . . . . .	54	37	" "	
Harvey Neelon . . . . .	65	47	" tug.	
L. Shickluna . . . . .	16	11	" "	



SESSIONAL PAPER No. 21

STEAM Vessels not Inspected, &c.—West Ontario Division—*Concluded.*

BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.	
			Why not Inspected and Class of Vessel	
Uncle Jim.....	11	8	Screw, fishing tug. " yacht.	Not running.
A. M. Petrie.....	20	13		
Total .....	3,697	2,283		

JNO. DODDS,  
E. W. McKEAN,  
*Steamboat Inspectors.*

TORONTO, Ont.

STEAM Vessel Inspected for the year ended June 30, 1903.

WEST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where Employed.
		1903.		\$ cts.	
Monarch .....	330	July 1..	2017	169 36	Screw, Windsor and Duluth.
International .....	Freight...	" 2..	851	Remitted.	Twin screw, Pt. Huron and Sarnia.
Lake Michigan .....	" .....	" 8..	573	50 84	Screw, Duluth and Quebec.
Erin.....	" .....	" 15..	651	57 08	" All lakes and rivers.
Arlington.....	100	" 16..	23	6 84	" Toronto Bay.
Scow No. 1....	100	" 16..		10 00	Scow, " " "
Clark Brothers.....	200	" 16..	92	12 36	Screw, " " and coasting.
R. C. Brittain .....	Freight...	" 17..	213	44 08	" Kingston and Duluth.
Edna .....	110	" 18..	55	9 40	" Pt. aux Baril and Penetang.
Bertha .....	36	" 18..	18	6 44	" " " Moon River.
Bobs.....	40	" 19..	38	8 04	" " " Penetang.
Emma.....	250	" 19..	146	19 68	" " " " "
Lorna Doone. ....	26	" 19..	26	7 08	" " " Moose Point.
Geraldine.....	40	" 19..	65	10 28	" " " Penetang.
Stiletto.....	20	" 21..	14	6 12	" Waubauskene and Moose Point.
Minnicog .....	40	" 21..	23	7 80	" Penetang and Pt. aux Baril.
City Queen.....	180	" 21..	69	10 52	" " " " "
Masonic.....	38	" 22..	39	8 12	" " " " "
John Lee, sr.....	291R 200L	" 22..	88	12 04	" " Collingwood.
Mayflower.....	35	" 23..	26	7 08	" Waubauskene and Pt. aux Baril.
Pearl.....	21	" 18..	6	5 48	" Mill Lake.
Maud.....	40	" 22..	40	8 20	" Penetang and Pt. aux Baril.
C. W. Chamberlain...	Freight...	Aug. 7..	385	35 80	" All lakes and rivers.
Myrtle .....		Not issued			
Islay.....	348	Aug. 8..	175	22 00	" Lake Simcoe.
Ella.....	40	" 8..	15	6 20	" " "
Enterprise.....	305	" 9..	148	19 84	" " "
Longford .....	150	" 9..	53	9 24	" " "
Glad Tidings .....	10	" 9..	10	5 80	" Severn River.
Lady Franklin .....	20	" 9..	5	5 40	" Sparrow Lake.



3-4 EDWARD VII. A. 1904

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*HULL INSPECTION—*Continued.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and Where Employed.
		1903.		\$ cts.	
Winona .....	230	Aug. 12..	231	26 48	Screw, Sarnia and Pt. Burwell.
Urania .....	500	" 12..	898	79 84	Paddle, Pt. Stanley and Lake Erie.
Acacia.....	200	" 13..	107	16 54	Screw, Hamilton and Burlington.
Joe Milton.....	200	" 14..	93	12 44	" Georgian Bay and Lake Huron.
Canada.....	512	" 15..	312	32 96	" " "
J. H. Jones.....	250	" 15..	152	20 16	" Lake Huron and Georgian Bay.
Ottawa .....	8	" 18..	2431	202 48	" Duluth and Prescott.
Wanita.....	109	" 20..	44	8 52	" Magnetawan River.
Wenonah.....	102	" 21..	161	20 88	Paddle and Screw, Magnetawan River.
Empress Victoria.....	100	" 22..	106	16 48	Screw, Huntsville and Portage.
Joe.....	40	" 22..	57	9 56	" " "
Gem.....	40	" 23..	9	5 72	" Pt. Sydney and Portage.
May Louise.....	40	Jany. 1..	64	10 12	" Lake of Bays.
Nippissing.....	310	Aug. 23..	275	30 00	Paddle, Muskoka Lakes.
Medora .....	360	" 23..	377	38 16	Screw. " "
Muskoka.....	301	" 23..	197	23 76	" " "
Mink .....	40	" 23..	56	9 48	" " "
Nymph .....	40	" 25..	29	7 32	" " "
Nymoca.....	40	" 25..	25	7 00	" " "
Islander.....	107	" 25..	165	21 20	" " "
Florence Main.....	100	" 26..	79	11 32	" " "
Ahmic.....	40	" 26..	43	8 44	" " "
Constance.....	40	" 26..	52	9 16	" " "
Flyer.....	18	" 27..	4	5 32	" " "
Charlie M.....	32	" 28..	50	9 00	" " "
City of Bala.....	40	" 29..	74	10 92	" " "
Oriole .....	100	" 28..	75	11 00	" " "
Kenozhu.....	289	" 27..	225	26 00	" " "
Advance.....	10	Sept. 3..	1031	90 48	" Duluth and Montreal.
City of Dresden.....	100	" 15..	194	23 52	" Windsor and Lake Erie.
Great Western .....	200	" 20..	1080	94 40	Paddle, Windsor and Detroit.
Lansdowne.....	200	" 20..	1571	133 68	" " "
Huron.....	245	" 20..	1052	92 16	Screw, " "
Eagle.....	40	" 23..	12	5 96	" Pt. Edward and Pt. Huron.
Comfort.....	40	" 24..	14	6 12	" Amherstburg and Sarnia.
Myles .....	Freight...	Oct. 2..	1,199	100 92	" All lakes and rivers.
Ossifrage.....	( 447 L.) ( 550 R.)	" 17..	632	58 56	" Michipicoten and Soo.
Philadelphia.....	40	" 17..	148	19 84	" Montreal and Duluth.
Algoma .....	650	" 20..	157	20 56	" Pt. Iroquois and Bruce Mines.
Hiram R. Dixon.....	300	" 21..	482	...	" Peninsular Harbour & Collingw'd.
Minnie M.....	( 468 L.) ( 598 R.)	" 22..	613	57 04	" Toledo and Soo.
Espanola.....	21	" 24..	7	5 56	" Spanish River.
Telegram.....	200	" 24..	198	23 84	" Collingwood and Soo.
Fanny Arnold.....	31	" 25..	73	10 84	" Killarney and Soo.
Albert Wright .....	12	" 25..	29	7 32	" Thessalon and Little Current.
Annie Moiles.....		Not issued			
I. G. Gidley .....	20	Oct. 27..	57	9 56	" Killarney and Soo.
Scotch Thistle.....	27	" 28..	17	6 36	" " and Blind River.
Fred Davidson.....	40	" 28..	43	8 44	" " and Soo.
Gypsy.....		Not issued			
Molly S.....	29	Nov. 1..	45	8 60	" " "
Edna Ivan .....	10	" 21..	53	9 32	" Little Current and Cockburn.
		1904.			
Lakeside.....	524	Mar. 24..	348	38 84	Screw, Toronto and Lake Ontario.
Macassa.....	616	" 24..	459	44 72	" " and Hamilton.
Winona.....	230	" 26..	231	26 48	" Sarnia and Pt. Burwell.
Ontario.....	500	" 27..	1,615	137 20	Paddle, Windsor and Detroit.
Michigan.....	500	" 27..	1,730	146 40	" " "
Algonquin.....	13	" 30..	1,806	152 48	Screw, Duluth and Prescott.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*HULL INSPECTION—*Continued.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where Employed.
		1904.		\$ cts.	
Rosedale.....	8	Mar. 30..	1,507	128 56	Screw, Duluth and Prescott.
Midland Queen.....	15	" 31..	1,993	167 44	" " "
Seguin.....	20	April 4..	818	73 44	" " and Quebec.
Iroquois.....	10	" 4..	2,359	196 72	" " and Prescott.
Majestic.....	631	" 6..	1,578	134 24	" Ft. William and Windsor.
City of Toronto.....	335	" 6..	782	70 56	Paddle, Penetang and Soo.
Germanic.....	502	" 7..	1,014	89 12	Screw, Collingwood and Duluth.
City of Collingwood....	364	" 7..	1,387	118 96	" " "
City of Midland.....	385	" 7..	974	85 92	" " and Soo.
Manitoba.....	500	" 8..	2,616	217 28	" Owen Sound and Ft. William.
Athabasca.....	500	" 8..	2,269	189 52	" " "
Arabian.....	12	" 10..	1,073	93 84	" Duluth and Quebec.
Orion.....	Freight..	" 10..	846	72 68	" All lakes and rivers.
Melbourne..	125	" 10..	894	.....	" Toledo and Montreal.
Erin.....	Freight..	" 10..	651	57 08	" All lakes and rivers.
Manitou.....	254	" 15..	470	45 60	" Lake Huron and Georgian Bay.
Huronic.....	563	" 16..	3,330	274 40	" Duluth and Windsor.
Monarch.....	345	" 16..	2,017	169 36	" " "
United Empire.....	357	" 16..	1,961	164 88	" " "
Alberta.....	500	" 17..	2,282	190 56	" Ft. William and Owen Sound.
City of Windsor.....	207	" 18..	511	48 88	" Collingwood and Soo.
City of Owen Sound....	250	" 18..	754	68 32	Paddle " "
Cuba.....	125	" 21..	931	82 48	Screw, Montreal and Sarnia.
Persia.....	150	" 21..	757	68 06	" " and Hamilton.
Ocean.....	125	" 25..	684	62 72	" " and Sarnia.
D. R. Vanallan.....	Freight..	" 25..	318	30 44	" Duluth and Montreal.
Atlantic.....	350	" 27..	683	62 64	" Collingwood and Soo.
Julian V. O'Brien.....	25	" 28..	59	9 72	" Georgian Bay.
Myles.....	Freight..	" 30..	1119	.....	" All lakes and rivers.
Annie Moiles.....	25	May 4..	71	.....	" Killarney and Soo.
King Edward.....	337	" 5..	571	53 68	Paddle, Toledo and Soo.
Chicora.....	872	" 11..	931	.....	" Toronto and Lake Ontario.
Island Queen.....	140	" 11..	23	.....	Screw, Toronto Bay.
Ongiara.....	244	" 11..	98	.....	" Niagara and Lewiston.
Norseman.....	Freight..	" 12..	620	.....	" Duluth and Prescott.
City of Chatham.....	627	" 14..	362	.....	" Chatham and Detroit.
Hiawatha.....	300	" 15..	163	.....	" Amherstburg and Port Huron.
Eagle.....	40	" 16..	12	.....	" Pt. Edward and Pt. Huron.
Lincoln.....	{ 496 R. }	" 19..	337	.....	" Sarnia and Lake Erie.
	{ 354 L. }				
Garden City.....	{ 760 R. }	" 21..	637	.....	Paddle, Toronto and Lake Ontario.
	{ 514 L. }				
Shamrock.....	412	" 22..	154	.....	" Toronto Bay
Mayflower.....	900	" 22..	189	.....	" "
Primrose.....	900	" 22..	189	.....	" "
Kathleen.....	220	" 22..	110	.....	Screw "
Corona.....	1456	" 23..	1274	.....	Paddle, Toronto and Lake Ontario.
White Star.....	{ 702 R. }	" 25..	451	.....	" " "
	{ 468 L. }				
Ojibway.....	400	" 26..	194	.....	Screw, Pt. Iroquois and Killarney.
Toronto.....	1000	" 27..	2779	.....	Paddle, Toronto and Prescott.
Ada Alice.....	125	" 27..	60	.....	Screw, Toronto Bay.
Hope.....	300	" 28..	170	.....	" Buffalo and Ft. Erie.
Maid of the Mist.....	80	" 28..	62	.....	" Niagara Falls, N.Y., and Ont.
Luella.....	110	" 29..	38	.....	" Toronto Bay.
Modjeska.....	801	June 4..	678	62 24	" Toronto and Hamilton.
Tecumseh.....	Freight..	" 4..	840	72 20	" All lakes and rivers.
Chippewa.....	2000	" 6..	1514	.....	Paddle, Toronto and Lake Ontario.
Brittanic.....	273	" 12..	428	42 24	" Collingwood and Soo.
John Haggart.....	235	" 15..	184	.....	Screw, Soo and Bruce Mines.
Albert Wright.....	20	" 16..	29	.....	" Thessalon and Little Current.



STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*

HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
	.	1903.		\$ cts.	
Gypsy.....	10	Nov. 1..	11	.....	Screw, Killarney and Soo.
		1904.			
Kingston..	1000	June 22..	2925	.....	Paddle, Toronto and Prescott.
Wapita....	20	Not issued		.....	
Pappoose..	168	June 25..	57	.....	Screw, Amherstburg and Detroit.
Pittsburg..	500	" 26..	1349	.....	Paddle, Buffalo and Soo.

STEAM Vessels inspected in Canada but registered elsewhere for the Year ended June 30, 1903.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Luna.....	450	July 3..	143	.....	Screw, Detroit River.
Hattie.....	200	" 4..	67	.....	" Detroit and Sarnia.
Frank E. Kirby..	975	" 4..	532	.....	Paddle, Lake Erie and Detroit River.
Fortune.....	502	Aug. 4..	200	.....	Screw, Pt. Iroquois and Thessalon.
		1902.			
Harley.....	40	Sept. 4..	23	.....	" Marysville and Stag Island.
		1903			
Columbian.....	1500	Sept. 16..	969	.....	" Amherstburg and Port Huron.
Victoria.....	250	" 16..	192	.....	" Detroit and Windsor.
Sappho.....	550	" 17..	224	.....	" Amherstburg and Sarnia.
Excelsior.....	250	" 17..	229	.....	" Detroit and Windsor.
Pleasure.....	1088	" 17..	490	.....	" Amherstburg and Port Huron.
Garland.....	517	" 18..	248	.....	" " "
Promise.....	1000	" 18..	473	.....	" " "
Tashmoo.....	1887	" 14..	1344	.....	Paddle " "
Greyhound.....	1748	" 19..	1392	.....	" " "
Michigan Central..	281	" 18..	1522	.....	" Windsor and Detroit.
Transfer.....	233	" 22..	1511	.....	" " "
Transport.....	256	" 22..	1595	.....	" " "
City of Toledo.....	1120	" 22..	1004	.....	" Toledo and Sarnia.
Grace Dormer.....	200	" 23..	66	.....	Screw, Sarnia and Port Huron.
James Beard.....	150	" 23..	87	.....	" " "
Welcome.....	266	" 24..	213	.....	" Port Huron and Windsor.
International.....	300	Oct. 16..	144	.....	" Bay Mills and Thessalon.
Niagara.....	349	Dec. 3..	214	.....	" Buffalo and Ft. Erie.
Ariel.....	226	" 8..	202	.....	" Walkerville and Detroit.
		1904.			
Shenango.....	950	Mar. 26..	1942	163 36	" All lakes and rivers.
		1903.			
Owana.....	1066	Mar. 28..	747	67 76	Paddle, Toledo and Goderich.
		1904.			
Benton.....	20	May 5..	304	32 32	Screw, Buffalo and Ft. William.
Wyandotte.....	904	" 13..	320	33 60	" Amherstburg and Pt. Huron.
Frank E. Kirby.....	975	" 14..	533	59 64	Paddle, Lake Erie and Detroit.
Hattie.....	200	June 25..	67	10 36	Screw, Sarnia and Detroit.

WM. EVANS, *Hull Inspector.*



SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1903.

EAST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Alert.....	150	July 7..	56.38	9 48	Screw, Cos. Vict. and Peterboro.
Victoria....		" 7..	3.90	5 32	" tug " "
Empress.....	224	" 7..	84.48	11 72	" " " "
Idle Hour.....			2.40	5 16	" " " "
Lorlei.....		July 8..	5.88	5 48	" pleasure yacht.
Hazlitt.....		" 8..	23.70	6 92	Paddle, alligator tug Cos. Vict.
Mollie.....		" 8..	10.72	5 88	Screw, pleasure yacht.
Estelle.....		" 9..	8.24	5 64	" " " "
Majestic.....	180	" 9..	67.77	10 44	" Cos. Vict. and Peterboro.
White Star.....		" 9..	8.88	5 72	" tug " "
Flash.....			4.74	5 40	" " " "
Muskoka.....			22.05	6 76	Paddle, alligator tug " "
Lady of the Lake.....	38	July 11..	32.95	7 64	Screw, Cos. Vict. and " "
Pearl.....	18	" 11..	6.39	5 48	" " " "
Stranger.....		" 11..	53.41	9 24	" tug " "
Maple Leafs.....	25	" 12..	26.08	7 08	" " " "
Calumet.....	30	" 12..	21.87	6 76	" " " "
Baptiste.....			7.51	5 64	Paddle, tug " "
Ogemah.....	175	July 12..	71.75	10 76	" " " "
Esturion.....	300	" 14..	139.39	19 12	" " " "
McClintock.....		" 9..	20.72	6 68	" tug " "
Cora.....	40	" 14..	22.61	6 84	Screw " "
Dauntless.....	10	" 15..	3.38	5 24	" Fenelon Falls & Kawartha L.
Kawartha.....	25	" 15..	16.69	6 36	" " " "
Beaver.....		" 15..	91.50	12 36	Paddle " "
Rockaway.....			6.80	5 56	" " " "
Waterwitch.....		July 16..	17.70	6 44	Screw " "
Sunbeam.....			104.92	16 40	" " " "
Marie Louise.....		July 16..	32.19	7 56	" tug " "
Kenosha.....	350	" 17..	266.20	29 28	Paddle, Cos. Vict. and Peterboro.
Rambler.....			8.75	5 72	" " " "
Greyhound.....			37.35	7 96	Screw " "
Minnie May.....		July 18..	10.20	5 80	Paddler tug, Coboconk and Fenelon.
Coboconk.....			9.11	5 72	" tug " "
Manita.....	150	July 18..	34.10	7 72	Screw, Cos. Vict. & Peterboro.
Stanley.....			6.80	5 56	Paddle, tug " "
Hiawatha.....			22.25	6 76	" " " "
Comet.....	32	July 19..	7.60	5 64	Screw " "
Dredge " Alfred ".....			89.19	12 12	No Propelling Power " "
Ajax.....		July 22..	32.97	7 64	Screw, tug Cos. Vict. & Peterboro.
Maida Vals.....		" 9..	18.74	6 52	Screw, pleasure yacht " "
Ruby.....			7.47	5 64	" " " "
City of Peterboro.....	310	July 25..	230.31	26 40	Twin screw, Rice Lake and tributaries
Water Lily.....	125	" 25..	53.93	9 32	Screw " "
Myrtle.....			5.26	5 40	" " " "
Bob Roy.....			4.52	5 40	" pleasure yacht " "
North Star.....	80	July 26..	39.60	8 20	" Rice Lake and tributaries.
Beaver.....	40	" 26..	18.00	6 44	" " " "
Rainbow.....	100	" 26..	50.69	9 08	" " " "
Mermaid.....			10.95	5 88	" pleasure yacht " "
Aberdeen.....		July 28..	12.65	6 04	" " " "
Wanda.....	30	June 20..	38.61	8 12	" Trenton and Prescott.
Kinirving.....		Aug. 1..	145.40	16 60	" freight, Rideau Canal.
Prince Edward.....	5	" 11..	18.22	6 44	Paddle, Tyendinaga and Sophiasburg
Florence.....		" 1..	6.70	5 56	Screw, fish tug, Bay of Quinte.
Vesta.....		" 1..	7.80	5 64	" pleasure yacht " "
Trent.....		" 1..	19.51	6 60	Paddle, alligator tug " "
Kilbirnie.....		" 14..	15.23	6 20	Screw, pleasure yacht, Rideau Canal.
Swan.....	32	" 1..	12.06	5 96	" Kingston and Ottawa.
Nellie.....	20	" 1..	6.82	5 56	" " " "
Lillian B.....	20	" 16..	3.76	5 32	" Carleton Place and Innesville.
Geraldine.....		" 18..	17.90	6 44	" pleasure yacht.



3-4 EDWARD VII. A. 1904

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Wenonah.....		Aug. 18..	5·59	5 48	Screw, pleasure yacht.
Tropic.....	30	" 19..	8·86	5 72	" Kingston and Ottawa.
Dorothy.....	10	June 16..	10·09	5 80	" Napanee and Trenton
Beaver.....		Sept. 1..	40·88	8 28	" tug, Cornwall Canal.
Annie Barrett.....		" 1..	41·89	8 36	" " " "
Gracie.....	40	" 9..	10·50	5 88	Paddle, Cornwall and Dundee.
Mary Ellen.....		" 1..	20·22	6 60	Screw, tug, Cornwall Canal.
Grenada.....	175	" 10..	57·00	9 56	" Kingston and Montreal.
Princess Louise.....	100	" 10..	26·36	7 08	" " "
Dredge Central City.....		" 1..	223·62	22 89	Farrans Pt. Canal.
D. P. Dey.....		" 1..	11·26	5 88	Screw, tug, Canal and River.
Alaska.....	40	" 1..	48·74	8 92	" Kingston and Cornwall.
Jubilee.....	40	" 1..	53·94	9 32	" Morrisburg and Waddington.
Dredge Ottomac.....		" 1..	195·65	20 68	Flaggs Bay, Canal.
A. B. Cooke.....		" 1..	34·17	7 72	Screw, tug, Canal and River.
Mary.....		" 1..	53·49	9 32	" " "
Torpedo.....		" 1..	197·69	20 84	Drill Boat, Canal.
Dredge "Iroquois".....		" 1..	287·18	27 96	Boulton Island, Canal.
Frank.....		" 1..	15·97	6 28	T.S., tug, Canal and River.
Gilbert.....		" 1..	40·83	8 28	Screw, tug " "
Dredge "St. Lawrence".....		" 1..	258·10	25 64	Cardinal Canal.
Ruth.....		" 1..	36·45	7 96	Screw, tug, Canal and River.
Dredge "Ottawa".....		" 1..	219·95	22 60	Cardinal Canal.
Wm. Davis.....		" 1..	40·23	8 20	Screw, tug, Canal and River.
Mona.....		" 1..	24·87	7 00	Screw, tug " "
Cleveland.....					Drill Scow, Canal.
Dredge "D. Stewart".....		" 1..	295·21	28 60	North Channel, Canal.
John Hunter.....		" 1..	32·14	7 56	Screw, tug, Canal and River.
Umbria.....		" 1..	42·98	8 44	" " "
Myra.....		" 1..	73·21	10 84	" " "
Jopl.....	10	Aug. 18..	10·54	5 88	Screw, Kingston and Prescott.
Frontenac.....		Sept. 1..	110·76	13 88	" tug, River St. Lawrence.
Alberta.....		Oct. 4..	122·43	14 76	" Freight " "
M & W.....			8·48	5 64	" " "
Dredge "No. 5".....		Sept. 1..	100·00	13 00	Gananogue.
Amy.....		" 1..	39·50	8 20	Screw, tug, River St. Lawrence.
Iona.....		Nov. 6..	231·53	5 00	" freight, all lakes and rivers.
Petrel.....		" 7..	345·76	32 68	T.S., tug " "
		1904.			
Pierrepoint.....	415	Mar. 12..	251·98	28 16	Paddle, Trenton and Prescott.
Resolute.....	25	" 21..	371·86	37 76	T.S., Chicago and Montreal.
Rescue.....	25	" 24..	52·29	9 16	Screw, Trenton and Prescott.
Reliance.....	25	" 24..	239·14	27 12	T.S., Chicago and Montreal.
Nile.....		" 24..	96·30	12 68	Screw, freight, River St. Lawrence.
Desoronto.....	85	" 24..	54·57	9 40	" Trenton and Pryners Cove
Ella Ross.....	300	" 25..	324·88	34 00	Paddle, Trenton and Prescott.
Ranger.....	15	" 25..	13·83	6 12	Screw, Trenton and Picton.
Armenia.....	250	" 25..	109·99	16 80	" " Prescott.
King Ben.....		" 26..	145·36	16 60	" freight, River St. Lawrence.
Glengarry.....			732·41	63 56	" " " "
Aletha.....	350	" 30..	171·27	21 68	" Brighton and Montreal.
D. D. Calvin.....		" 31..	749·53	65 00	" freight, all lakes and river.
India.....		" 31..	976·49	83 08	" " " "
David G. Thompson.....		April 4..	185·05	19 80	" tug, lake and river.
Rosemount.....		" 4..	1,580·37	131 40	" freight, all lakes.
Skylark.....		June 19..	43·29	8 44	" pleasure yacht.
Lloyd S. Porter.....		April 11..	488·63	44 12	" freight, Great Lakes.
Bothnia.....		" 13..	833·36	71 64	" " "
Alexandria.....	600	" 14..	863·15	77 04	Paddle, Charlotte and Quebec.
Aberdeen.....		" 15..	141·86	16 36	Screw, freight, River St. Lawrence.
Chieftain.....		" 16..	434·68	39 80	Paddle, tug " "



SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—East Ontario Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
Parthia.....		April 20..	198·13	20 84	Paddle, tug, River St. Lawrence.
Valeria.....	40	" 21..	51·55	9 16	Screw, Kingston and Prescott.
Chance.....		" 22..	5·02	5 40	" pleasure yacht.
H. F. Bronson.....		" 22..	137·12	15 96	T.S., tug, River St. Lawrence.
Jessie Hall.....		" 24..	56·54	9 56	Screw, tug " "
Glide.....		" 28..	77·90		Screw, tug, River St. Lawrence.
John Milne.....		May 1..	108·53		" freight " "
Rideau King.....	300	" 2..	265·92		" Kingston and Ottawa.
Rideau Queen.....	300	" 4..	350·75		" " "
Kate.....		" 6..	22·41		" pleasure yacht.
America.....	600	" 8..	520·53		Paddle, Trenton and Montreal.
Jessie Forward.....		" 18..	5·64		Screw, pleasure yacht.
Dorothy.....			10·09		" Napanee and Trenton.
Reindeer.....	150	May 18..	58·29		" Napanee and Prinners Cove.
Annie Lake.....	40	" 19..	18·52		" Brighton and Prescott.
Madge.....		" 19..	9·49		" pleasure yacht.
Kismet.....		" 19..	5·42		" " "
Ullacallula.....					" " "
Mildred.....			4·50		" " "
Niagara.....	450	May 20..	396·43		" Toronto and Montreal.
North King.....	525	" 26..	872·95		Paddle, Lake Ont. and R. St. Law'r.
Varuna.....	275	" 27..	134·04		Screw, Trenton and Prescott.
Kinirving.....		" 28..	145·40		" freight, Rideau Canal.
Brockville.....	358	" 29..	190·75		" Kingston and Cornwall.
Argyle.....	800	June 3..	700·29		Paddle, Lake Ont. and R. St. Law'r.
Where Now.....			47·78		Screw, River St. Lawrence.
Aberdeen.....		June 11..	12·65		" pleasure yacht.
Caspian.....	500	" 12..	957·44		Paddle, Charlotte and 1000 Islands.
Antelope.....	40	" 16..	24·98		Screw, Trenton and Prescott.
Illecillewaet.....		" 16..	15·69		" pleasure yacht.
Lee.....	35	" 17..	8·73		" Kingston and Prescott.
Albani.....		" 17..	57·83		" pleasure yacht.
Leone.....	25	" 17..	4·26		" Kingston and Prescott.
Zeila.....			3·40		" " "
Dortha.....		June 18..	50·98		" pleasure yacht.
Ellen.....	40	" 18..	25·10		" Kingston and Prescott.
Victoria.....	186	" 18..	58 10		" Trenton and Prescott.
International.....		" 20..	395·31		Twin S., freight, Presc. & Ogdensburg.
City of Belleville.....	40	" 20..	101·17		Screw, Prescott and Morristown.
David S. Walker.....					" tug, River St. Lawrence.
Dredge Central City.....			223·62		Farrans Point Canal.
D. P. Dey.....		June 27..	11·26		Screw, tug, River St. Lawrence.
Dredge No. 4.....		" 27..	175·41		Farrans Point Canal.
Donnelly.....			318·91		Paddle, River St. Lawrence.
Wanda.....	30	June 30..	38·61		Screw, Trenton and Montreal.
Total.....			21,357 45	1,839 13	

THOS. P. THOMPSON,  
*Steamboat Inspector.*



STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1903.

EAST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Pas- sengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Ins- pection Fees Paid.	Class of Vessels and Where employed.
		1903.		\$ cts.	
Thyra .....	40	July 5..	36·00	.....	Screw, Trenton and Montreal.
Columbia.....			26·00	.....	
Grand View .....			17·00	.....	
Nightingale. ....	40	Sept. 22..	56·76	.....	Screw, Trenton and Ogdensburg.
		1904.			
New Island Wanderer.	400	M'ch. 26..	123·00	17 84	Screw, Kingston and Ogdensburg.
St. Lawrence.....	645	May 7..	312·90	33 04	Paddle, " "
Islander .. .....	468	" 7..	118·61	17 52	" Trenton "
Ramona.....	150	June 8..	57·07	9 56	Screw, " "
New York.....	730	" 8..	294·87	31 52	Paddle, Kingston "
Niagara .....	40	" 11..	36·00	7 88	Screw, Lake Ont. and Quebec.
Wm. Armstrong ..			181·24	22 48	" Brockville and Ogdensburg.
Island Belle .. ..	325	" 19 .	89·77	12 20	" Kingston "
Henry Plumb. . . .	225	" 20..	92·78	12 44	" Cape Vincent and Cornwall.
Dean.....	27	" 20..	11·19	5 88	" Kingston and Montreal.
Milton .. .....	40	" 20..	19·42	6 52	" " "
Outing .....	25	" 20..	15·87	6 28	" " Ft. Covington.
Massena.....			89·67	12 20	" "
Mary.....	300	" 20..	174·64	21 94	" Kingston and Ft. Covington.
Algona .....	275	" 20..	92·06	12 36	" Cape Vincent and Cornwall.
Sophia... ..	25	" 20..	16·36	6 28	" Trenton and Montreal.
H. P. Bigelow.....	100	" 20..	46·67	8 76	" Kingston and Prescott.
Sirius .....	46	" 20..	22·78	6 84	" Trenton and Montreal.
Capt. Visgar.....	110	" 20..	29·23	7 32	" Kingston and Ogdensburg.
Spry .....	25	" 20..	4·39	5 32	" " "
Idler .....	150	" 20..	57·00	9 56	" Trenton and Quebec.
Valetta.....	38	" 20..	27·84	7 24	" " Ogdensburg.
Gen. W. B. Franklin..	20	" 20..	11·35	5 88	" Kingston and "
Virginia .....	35	" 20..	21·00	6 68	" " "
I. Wonder.....	32	" 20..	16·11	6 28	" " "
Total.....			2,097·58	\$299 80	

STEAM Vessels not Inspected for the Year ended June 30, 1903.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Dolce .. .....	4·74	3·22	Screw, no application.
Mary Ethel.....	98·61	56·13	Paddle "
Startled Fawn.....	25·49	17·34	Screw "
Marmora .....	12·96	8·82	" "
Mabel C.....	4·48	3·36	" "
Maud L.....	14·05	9·56	" "
Dawn.....	20·20	15·90	" not in commission.
Total.....	180 53	114·33	

THOS. P. THOMPSON,  
Steam' oat Inspector.



## SESSIONAL PAPER No. 21

## STEAM Vessels Inspected for the Year ended June 30, 1903.

## EAST ONTARIO DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
1903				\$   cts.	
Ellen .....	40	July 7 ..	25	7 00	Screw, Kingston and Prescott.
Leone .....	25	" 7 ..	4	5 32	" " "
Where Now .....	No. ....	Not issued	48	8 84	" " "
Rival .....	P. 100	July 11.	125	18 00	Paddle " "
City of Peterboro.....	Fer. 250				
Waterlily .....	310	" 17..	224	26 40	T. Screw, Rice Lake and tributaries.
	125	" 17..	54	9 32	" " "
1902.					
Beaver .....	40	Dec. 31..	18	6 44	" " "
1903.					
North Star .....	80	July 18..	40	8 20	" " "
Rainbow .....	100	" 18..	51	9 08	" " "
Rob Roy .....	10	" 18..	5	5 40	" " "
Myrtle .....	20	" 18..	5	5 40	" " "
Empress .....	224	" 19..	84	11 72	" Cos. Victoria and Peterboro'.
Majestic .....	180	" 19..	68	10 44	" " "
Alert .....	150	" 19..	56	9 48	" " "
Sunbeam .....	175	Not issued	105	16 40	" " "
Esturian.....	300	July 21..	139	19 12	Paddle " "
Manita.....	150	" 21..	34	7 72	Screw " "
Comet .....	32	" 21..	8	5 64	" " "
Calumet .....	30	" 22..	22	6 76	" " "
Ogemah .....	175	" 22..	72	10 76	Paddle " "
Pearl.....	18	" 23..	6	5 48	Screw " "
Dauntless. ....	10	" 23..	3	5 24	" Kawartha Lakes.
Kawartha .....	25	" 23..	17	6 36	" " "
Lady of the Lakes .....	38	" 24..	33	7 64	" Cos. Victoria and Peterboro'.
Maple Leaf. ....	25	" 24..	26	7 08	" " "
Ivy .....	30	" 28..	7	5 56	" Cornwall and Stanley Isle.
Stranger .....	No....	Not issued	70	10 20	" Kingston and Montreal.
1902.					
Jessie Bain....	150	Nov. 15..	67	10 36	" Ottawa and Thurso.
1903.					
Wanda .....	30	July 5..	39	8 12	" Trenton and Prescott.
Swan .....	32	Aug. 12..	12	5 96	" Kingston and Ottawa.
Nellie .....	20	" 12..	7	5 56	" " "
Tropic .....	No, ....	Not issued	9	5 72	" " "
Lillian B. ....	" .....	" .....	4	5 32	" Carleton Place and Innisville.
D. A. Martin. ....	" .....	" .....	78	11 24	" Turtle Portage and North River.
1903.					
R. Hurdman.....	40	Sept. 3..	93	12 44	" Lake Kippewa and tributaries.
Alice .....	40	" 3..	26	7 08	" " "
Meteor .....	200	" 4..	299	31 92	" Lake Temiskamingue and trib.
Clyde .....	15	" 5..	29	7 32	" " "
Ville Marie.....	No. ....	Not issued	32	7 56	" " "
Hudson .....	40	Sept. 8..	45	8 60	Paddle, Barry's Bay and Havergal.
Pontiac .....	230	" 9..	116	17 28	" Chats Lake.
Grenada .....	P. 175	" 11..	57	9 56	Screw, Kingston and Montreal.
Princess Louise. ....	M. 125				
	65	" 11..	26	7 08	" " "
Gracie.....	P. 100	Not issued	11	5 88	Paddle, Cornwall and Dundee.



STEAM Vessels Inspected—East Ontario Division—Concluded.

HULL INSPECTION—Concluded.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Dorothy .....	10	Sept. 22..	10	5 80	Screw, Napanee and Trenton.
Jopl .....	40	" 26..	11	5 88	" Kingston and Prescott.
Iona, (2nd Insp.)* .....	Freight...	Oct. 28..	232	5 00	" lakes and rivers.
Prince Edward .....	No.....	Not issued	18	6 44	Ctr. paddle, Tyendinaga and Sophiaburg.
Clinton .....	Freight...	" ..	430	39 40	Screw, lakes and rivers.
Alaska .....	40	Dec. 15..	49	8 92	" Kingston and Cornwall.
		1904.			
Resolute .....	25	Mar. 25..	372	37 76	T. Screw, Chicago and Montreal.
Pierrepont .....	415	April 3..	252	28 16	Paddle, Trenton and Prescott.
Rosemount .....	Freight...	" 4..	1,580	131 40	Screw, lakes and rivers.
Rescue.....	25	" 6..	52	9 16	" Trenton and Prescott.
Ranger .....	15	" 7..	14	6 12	" " Picton.
Reliance .....	25	" 7..	239	27 12	T. Screw, Chicago and Montreal.
Ella Ross .....	300	" 7..	325	34 00	Paddle Trenton and Prescott.
Deseronto .....	85	" 7..	55	9 40	Screw " Prinyer Cove.
Armenia.. ..	250	" 7..	110	16 80	" " Prescott.
Lloyd S. Porter .....	Freight...	" 11..	489	44 12	" lakes and rivers.
D. D. Calvin .....	" ..	" 17..	750	65 00	" " "
India .....	" ..	" 17..	976	83 08	" " "
Clinton .....	Freight...	Not issued	430	39 40	" " "
Bothnia .....	" ..	April 22..	833	71 64	" " "
Alexandria. { L. 400 }		" 24..	863	77 04	Paddle, Charlotte and Quebec.
Valeria..... { R. 600 }		" 27..	52	9 16	Screw, Kingston and Prescott.
Rideau King.....	300	May 2..	266	No. ....	" " and Ottawa.
America..... { M. 400 }		" 7..	521	" ....	Paddle, Trenton and Montreal.
{ P. 600 }					
Aletha..... { M. 240 }		" 18..	171	21 68	Screw, Brighton and "
{ P. 350 }					
Niagara..... { L. 300 }		" 20..	396	No. ....	" Toronto and "
{ R. 450 }					
Reindeer.....	150	" 20..	58	" ....	" Napanee and Prinyer Cove.
Annie Lake.....	40	" 20..	19	" ....	" Brighton and Prescott.
		1903.			
Tropic .....	30	Aug. 12..	9	" ....	" Kingston and Ottawa.
Gracie.....	40	Sept. 12..	11	" ....	Paddle, Cornwall and Dundee.
Lillian B.....	20	Aug. 12..	4	" ....	Screw, Carleton Place and Innisville.
		1904.			
North King.....	525	May 29..	873	" ....	Paddle, Lake Ontario and St. L. River.
Rideau Queen { K. & M. 150 }		" 30..	351	" ....	Screw, Kingston, Montreal and Ottawa.
{ K. & O. 300 }					
Argyle..... { L. 535 }		June 4..	700	" ....	Paddle, Lake Ontario and St. L. River.
{ R. 800 }					
Prince Edward.....	5	" 5..	18	" ....	Ctr. paddle, Tyendinaga and Sophiasburg.
Varuna .....	275	" 5..	134	" ....	Screw, Trenton and Prescott.
Simla .....	Freight...	" 13..	1490	" ....	" lakes and rivers.
Antelope .....	40	" 16..	25	" ....	" Trenton and Prescott.
Lee.....	35	" 16..	9	" ....	" Kingston and "
Victoria..... { P. 186 }		" 16..	58	" ....	" " and Cornwall.
{ C. 125 }					
Leone.....	25	" 16..	4	" ....	" " and Prescott.
Brockville ... { P. 358 }		" 17..	191	" ....	" " and Cornwall.
{ C. 240 }					
Zeilia.....	No. ....	Not issued	3	" ....	" " and Prescott.
City of Belleville.....	40	June 18..	101	" ....	" B. P. and O. ferries.
International.....	Freight...	" 18..	395	" ....	T. Screw, Prescott and Ogd. ferry.
Caspian .....	500	" 27..	957	" ....	Paddle, Charlotte and Thousand Islands.

M. R. DAVIS, *Hull Inspector.*



## SESSIONAL PAPER No. 21

STEAM Vessels inspected in Canada but Registered elsewhere for the Year ended  
June 30, 1903.

## EAST ONTARIO DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and Where employed.
		1903		\$ cts.	
Little Mac.....	40	July 30..	25	"	Screw, Kingston and Ogdensburgh.
Island Belle.....	330	June 25..	90	"	" " "
Valetta.....	38	Aug. 29..	28	"	" Trenton "
Arondell..... { L.	250	Not issued	3 39	"	" Charlotte "
{ R.	500				
	40	Sept. 22..	57	"	" Trenton "
		1904.			
Nightingale.....					
New Island Wanderer.	400	May 27..	1 23	17 84	" Kingston "
St. Lawrence.....	645	" 7..	3 13	33 04	Paddle, " "
Islander.....	468	" 13..	1 19	17 52	" Trenton "
Ramona.....	150	June 8..	57	9 56	Screw, " "
New York.....	730	" 8..	2 94	31 52	Paddle, Kingston "
Niagara... { C.	15	" 11..	36	7 88	Screw, L. O. C. and St. L. River.
{ R.	40				
Wm. Armstrong.....	25	" 17..	1 81	22 48	" B. P. and Ogds. Ferry.
Island Belle.....	325	" 17..	90	12 20	" Kingston and Ogdensburgh.
Mary..... { Ft. C.	200	" 17..	1 74	21 93	" " Ft. Covington.
{ P.	300				
Dean... { P.	27	" 17..	11	5 88	" " Montreal.
{ M.	18				
Milton... { P.	40	" 17..	19	6 52	" " "
{ M.	20				
Algoma... { P.	275	" 18..	92	12 36	" Cape Vincent and Cornwall.
{ C.	175				
Outing.....	25	" 18..	16	6 28	" Kingston and Ft. Covington.
Henry Plumb..... { P.	225	" 18	93	12 44	" Cape Vincent and Cornwall.
{ C.	150				
Massena... { P.	250	Not issued	90	12 20	" " "
{ C.	175				
Idler..... { Q.	100	June 19..	57	9 56	" Trenton and Quebec.
{ P.	150				
Sirius... { M.	30	" 19..	23	6 84	" " Montreal.
{ P.	46				
H. P. Biglow.....	100	" 19..	47	8 76	" Kingston and Prescott.
Spry.....	25	" 19..	4	5 32	" " Ogdensburgh.
Virginia.....	35	" 19..	21	6 68	" " "
I Wonder.....	32	" 19..	16	6 28	" " "
Gen. W. B. Franklin..	20	" 20..	11	5 88	" " "
Castanet.....	175	" 20..	55	9 40	" " "
Capt. Visgar.....	110	" 20..	29	7 32	" " "
Capt. Dave Wagoner..	30	" 20..	19	6 52	" " "

M. R. DAVIS,  
*Hull Inspector.*



3-4 EDWARD VII. A. 1904

STATEMENT of Tow Barges inspected, and of Certificates of Inspection issued to Tow Barges for the Year ended June 30, 1903.

EAST ONTARIO DIVISION.

Name of Vessel.	Number of Passengers.	Port of Inspection.	Date of Inspection.	Date Certificate Expires.	Gross Tonnage.	Inspection Fees.
				1903.		\$ cts.
Otonabee .....	200	Peterboro....	July 17..	July 17..	49	10 00
Lady Smith .....	265	Lakefield.....	" 19..	" 19..	76	10 00
Eclipse.....	150	" .....	" 19..	" 19..	38	10 00
Lindsay.....	400	Bobcaygeon.....	" 22..	" 22..	75	10 00
Hastings .....	150	Hastings .....	" 25..	" 25..	36	10 00
Sultana.....	150	" .....	" 25..	" 25..	40	10 00
	1,315				314	60 00

M. R. DAVIS,  
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended June 30, 1903.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Bella Ritchie.....	125	July 2...	69	10 52	Paddle, pass., Montreal & Beauharnois.
Valleyfield.....	450	" 7...	417	41 36	Twin screw pass., Montreal & Valleyfield
Jessie.....	Tug .....	" 9...	19	6 52	Screw tug, St. Lawrence River.
Mathilda .....	" .....	" 14...	114	14 12	" .....
Alice.....	" .....	" 14...	57	10 36	" .....
St. Michael.....	" .....	" 15...	16	6 28	Paddle tug, Ottawa River.
		1902.			
British Lion .....	Tug.. ..	Dec 1...	25	7 00	Screw .....
Stranger.....	Unfit .....	Not issued	65	10 20	" pass., St. Lawrence River.
		1903.			
Ivy.....	30	July 30...	7	5 56	Screw, pass., Cornwall & Stanley Island.
Speed .....	Tug. ....	Aug. 5...	16	6 28	" tug, St. Lawrence River.
Tak-it-Esy.....	" .....	" 12...	5	5 40	" .....
Bonenfant.....	25	" 13...	31	7 48	Twin screw, ferry, Bout de l'Ile and Charlemagne.
John.....	40	" 14...	34	7 72	Centre wheel ferry, Carillon and Point Fortune.
Beatrice B. ....		Not issued	59	9 72	Screw, pass., Deschesne Lake.
C. E. Read ...	Tug.. ....	Sept. 2...	13	6 04	Paddle tug, Lake Kippewa.
F. W. Avery .....	" .....	" 2...	14	6 12	" .....
D. A. Martin.....		" 2...	78	11 24	Screw, pass., North River.
R. Hurdman. ....	40	" 3...	93	12 44	" Lake Kippewa.
Alice .....	40	" 3...	26	7 08	" .....



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Montreal Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Otter .....	Tug. ....	Sept. 3...	21	6 68	Paddle tug, lake Kippewa.
North River .....	" .....	" 3...	22	6 76	" .....
Beaver .....	" .....	" 4...	13	6 04	" Lake Témiscamingue.
Mink .....	" .....	" 4...	14	6 12	" .....
Dora .....	" .....	" 4...	48	8 84	Screw tug, .....
Argo .....	" .....	" 4...	154	20 32	Paddle .....
Meteor .....	350 .....	" 5...	299	31 92	Screw, pass., .....
Ville Marie .....	Tug. ....	Not issued	32	7 56	" tug, .....
Clyde .....	15 .....	Sept. 5...	29	7 32	" pass., Lake Témiscamingue.
Little Roxy .....	Tug. ....	" 6...	12	5 96	" tug, .....
Hudson .....	40 .....	" 8...	45	8 60	Paddle, pass. Barry's Bay & Combermere
Pontiac .....	250 .....	" 10...	116	17 28	" Chats Lake.
Chaffey .....	40 .....	" 19...	42	8 36	Screw, pass., Lancaster & Valleyfield.
Scout .....	B. service.				Dept. of Marine and Fisheries.
Wild Rose .....	P. yacht..	Nov. 10...	10	5 80	Screw, pleasure yacht St. Lawrence Riv.
		1904.			
Longueuil .....	300 .....	Mar. 28...	365		Paddle, ferry, Montreal & Longueuil.
Boucherville .....	600 .....	" 28...	419		" .....
St. Laurent .....	267 .....	April 6...	546		Paddle, pass., Montreal & Berthier.
Derrick No. 2 .....		" 8...	100		Derrick, Montreal.
Hubert Larkin .....	Tug. ....	" 9...	49		Screw, tug, St. Lawrence River.
Montmorency .....	" .....	" 10...	18		" .....
Tak-it-Esy .....	" .....	" 10...	5		" .....
Dredge Pontiac .....		" 10...	221		Dredge .....
Dolphin .....	Tug. ....	" 20...	70	10 60	Screw, tug, Ottawa River.
Florence .....	" .....	" 20...	62	9 96	" .....
Archie Stewart .....	" .....	" 20...	80	11 40	" .....
G. H. Harris .....	" .....	" 20...	87	11 96	" .....
Sir Hector .....	" .....	" 20...	40	8 20	" .....
D. B. Mulligan .....	40 .....	" 21...	77		Screw, ferrry, Pembroke & Desjardins.
Victoria .....	400 .....	" 21...	188	23 04	Paddle, pass., Pembroke & Des Joachim
E. H. Bronson .....	Tug. ....	" 21...	285	27 80	" tug, Upper Ottawa River.
C. B. Powell .....	" .....	" 21...	272	26 76	" .....
Alex Fraser .....	" .....	" 22...	320	30 60	" .....
Hercules .....	" .....	" 22...	21	6 68	" .....
Pembroke .....	" .....	" 22...	194	20 52	" .....
Tit Willow .....	P. yacht..	" 22...	17		Screw yacht .....
G. H. Notter .....	Tug. ....	" 23...	14	6 12	" tug, Ottawa River.
Rockland .....	" .....	" 23...	78	11 24	" .....
Alva .....	Tug. ....	" 23...	27		" .....
Hall .....	50 .....	" 23...	247		" frt., pass., Ottawa and Montreal.
Welshman .....	25 .....	" 23...	156		" .....
Cacouna .....	Freight ..	" 28...	1,451		" freight, Canadian and foreign.
Scotsman .....	40 .....	" 29...	265		" frt., pass., Ottawa and Montreal.
Olive .....	60 .....	" 29...	151		" .....
Ida .....	40 .....	" 29...	247		" .....
British Lion .....	Tug. ....	" 29...	25		" tug, Ottawa river.
Harry Bate .....	Freight ..	" 29...	254		" freight, Ottawa and Montreal.
Hebron .....	" .....	May 4...	149		" .....
Dredge No. 4 .....		" 4...	100		Dredge, Montreal.
Cape Breton .....	Freight ..	" 11...	1,764		Screw, freight, Canadian and foreign.
Seaborn .....	P. yacht..	" 11...	30		" yacht, St. Lawrence river.
Charlemagne .....	Tug. ....	" 13...	76	11 08	" tug .....
Surveyor .....	Freight ..	" 13...	50		" freight .....
Sovereign .....	700 .....	" 15...	637		Paddle, pass., Montreal and Carillon.
Empress .....	800 .....	" 20...	678		" .....
Victoria .....	300 .....	" 20...	181		Screw .....
Russell .....	Tug. ....	" 20...	76		" tug .....
Ada .....	" .....	" 20...	29		" .....
G. B. Greene .....	600 .....	" 21...	255	28 40	Paddle, pass., Deschene Lake.
Albert .....	Tug. ....	" 21...	269	26 52	" tug .....



3-4 EDWARD VII. A. 1904

STEAM Vessels Inspected, &c.—Montreal Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
G. B. Pattee.....	Tug.....	May 21..	30	7 40	Screw tug, Deschene Lake.
Beatrice B.....	40	" 21..	59		" pass. "
Pontiac.....	250	" 22..	116		Paddle " Chats Lake.
Madawaska.....	Tug.....	" 22..	15		" warp tug "
Amable du Fond. ....	"	" 22..	17		" " "
Coulonge.....	"	" 22..	18		" " "
Hamilton .....	"	" 23..	320	30 60	" tug "
J. L. Murphy.....	"	" 23..	173	18 84	Screw " "
Sampson .....	"	" 23..	15	6 20	Paddle, warp tug "
Mansfield.....	15	" 23..	169		Screw, ferry, Ottawa and Gatineau Pt.
Agnes.....	40	" 23..	29		" pass., Buckingham & High Rock.
Mildred .....	25	" 25..	15		" " " "
Leon .....	15	" 25..	15		" " High Rock & N. D. de Laus
Dredge Otto.....		June 2..	100		Dredge, St. Lawrence River.
" King Edward..		" 2..	100		" " "
May .....	P. yacht..	" 3..	21		Screw, yacht "
Laurier .....	Tug.....	" 6..	19		" tug "
Alexandria .....	P. yacht..	" 8..	53		" yacht, Richelieu River.
Duchess of York.....	700	" 8..	490		Paddle, pass., Montreal and Cavillon.
Princess.....	200	" 9..	527		" " " "
Maude .....	200	" 9..	269		" " " Ottawa.
Filgate.....	400	" 9..	425		" " " Cornwall.
Salabery.....	40	" 9..	222		Screw " " Valleyfield
Chummy.....	Tug.....	" 10..	5		" tug, Ottawa River.
Bonito .....	30	" 11..	17		" ferry, Calumet and L'Orignal.
Leo.....	20	" 11..	2		" " Hawkesb'y and Grenville.
T. Osborne .....	Tug.....	" 11..	25		" tug, Ottawa River.
Sandy .....	"	" 12..	30		" " "
Glide .....	40	" 12..	80		" ferry, Hawkesbury and Calumet.
Annie Laurie.....	P. yacht..	" 16..	3		" yacht, Lake Nipissing.
Queen .....	40	" 16..	15		" pass. "
Carmita .....	P. yacht..	" 16..	9		" yacht "
Sparrow.....	40	" 16..	38		" pass. "
Vanwoodland .....	100	" 16..	37		" " "
Booth .....	40	" 17..	347		Paddle " "
Ladas .....	Tug.....	" 17..	54		Screw, tug "
Zephyr.....	"	" 17..	3		" " "
Nosbonsing .....	"	" 17..	25		" " Lake Nosbonsing.
Empress .....	40	" 18..	36		" pass., Lake Nipissing.
Osprey.....	Tug.....	" 18..	6		" fishing boat "
Sea Flower.....	Tug.....	" 18..	6		" tug, Lake Nipissing.
Shoofly.....	"	" 18..	10		" " "
Madoc .....	"	" 18..	8		Paddle, warp tug " "
Monarch .....	"	" 19..	37		" " " "
Fleur de Mai.....	"	" 19..	7		Screw, tug " "
Turtle.....	"	" 19..	38		Paddle, warp tug " "
Dorothy.....	P. Yacht.	" 19..	10		Screw, yacht " "
Verva.....	40	" 20..	54		Screw, pas., Lake Wahnapiatae.
Mahigama .....	10	" 22..	20		" " Pembroke & Fort William.
Tiger .....	P. Yacht.	" 22..	4		" yacht, Madawaska river.
Hudson.....	40	" 23..	45		Paddle, pass., Barry's bay & Havergal.
Honoré.....	Tug .....	" 23..	22		Screw, tug, St. Lawrence river.
Valleyfield.....	450	" 26..	417		Twin screw, pass., Montreal & Valleyfield
Total.....			17,297	\$672 92	

WM. LAURIE,  
Steamboat Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended  
June 30, 1903.

## MONTREAL DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers. allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
Farmand.....	Freight...	May 12..	13·87	115 96	Screw, Montreal and Sydney.

WM. LAURIE,  
*Steamboat Inspector.*



STEAM Vessels Inspected for the year ended June 30, 1903.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Windermere.....		July 9..	31	7 48	Screw, yacht, rivers.
Kate.....		" 12..	61	9 88	" tug, St. Lawrence river.
Lucia.....		" 19..	41	8 28	" tug, Montreal harbour.
Dredge No. 4.....		Aug. 9..	100	13 00	Dipper dredge, rivers.
Mary A. Laughlin.....		" 9..	23	6 84	Screw, tug, St. Lawrence river.
Maggie May.....		" 18..	29	7 32	" " " "
Maggie R. King.....		Sept. 3..	27	7 16	" " Lachine canal.
Quebec.....		" 11..	108	13 64	" freight, St. Lawrence river.
		1904			
Robert McKay.....	150	Mar. 21..	129	15 32	" pass. and tug, Montreal harbour.
Derrick No. 5.....		" 21..	100	13 00	Derrick, Montreal harbour.
Derrick No. 4.....		" 23..	100	13 00	" " "
Derrick No. 3.....		" 23..	100	13 00	" " "
Aberdeen.....	150	" 27..	87	11 96	Screw, pass. and tug, Montreal harbour.
Derrick No. 1.....		" 27..	100	13 00	Derrick, Montreal harbour.
Dredge No. 2.....		" 28..	100	13 00	Dipper dredge, Montreal harbour,
Dredge No. 4.....		" 28..	461	41 83	" " " "
Derrick No. 6.....		" 28..	100	13 00	Derrick " "
Dredge No. 1.....		April 6..	100	13 00	Dipper dredge " "
Dredge No. 3.....		" 6..	100	13 00	" " " "
St. Louis.....		" 7..	34	7 72	Screw, tug " "
Courier.....	25	" 7..	12	5 96	" pass. and tug, Montreal harbour.
H. Larosée.....		" 21..	13	6 04	" tug, Lachine canal.
Drill Boat.....		" 23..	100	13 00	Drill boat, Montreal harbour.
T. H. Naismith.....		May 1..	49	8 92	Screw, tug " "
Ida.....		" 4..	26		" " canals.
Dauntless.....		" 4..	81		" " Lake Ontario.
Pile Driver.....		" 6..	100		Pile driver, Montreal harbour.
Derrick Assistance.....		" 7..	100		Derrick " "
Frank Perew.....		" 20..	43		Screw, tug, St. Lawrence river.
Nellie Reid.....		" 27..	56		" " " "
Tim Doyle.....		" 29..	15		" " Lachine canal.
Grain Elevator No. 8.....		June 2..	80		" grain elevator, Montreal harbour.
Armenia.....		" 5..	467		" frght, Lake Ont. and St. Lawr. riv.
Plover.....		" 5..	40		" tug, Lachine canal.
Grain Elevator No. 5.....		" 10..	80		" grain elevator, Montreal harbour.
Grain Elevator No. 18.....		" 10..	214		" " " "
Grain Elevator No. 12.....		" 13..	183		" " " "
Grain Elevator No. 13.....		" 13..	178		" " " "
Grain Elevator No. 2.....		" 13..	170		" " " "
Grain Elevator No. 4.....		" 15..	188		" " " "
Grain Elevator No. 16.....		" 16..	210		" " " "
Grain Elevator No. 14.....		" 17..	181		" " " "
Grain Elevator No. 7.....		" 18..	170		" " " "
*St. George.....		Not issued	68		" tug, not running.
Grain Elevator No. 1.....		June 19..	165		" grain elevator, Montreal harbour.
Grain Elevator No. 10.....		" 19..	173		" " " "
Grain Elevator No. 15.....		" 22..	213		" " " "
Grain Elevator No. 9.....		" 22..	172		" " " "
Grain Elevator No. 11.....		" 23..	169		" " " "
Grain Elevator No. 6.....		" 24..	170		" " " "
Agnes McMahon.....		" 24..	54		" tug, Ottawa river.
Total.....			5,871	\$288 40	

\* Inspection not completed.

LOUIS ARPIN,  
Steamboat Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels not Inspected for the Year ended June 30, 1903.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.	
			Why not Inspected and Class of Vessel.	
Hector.....	21	14	Screw tug.	
Antelope....	83	57	" "	
C. W. Dennis ..	17	8	" "	
H. M. Mixer.....	30	9	" "	
West Arm. ....	27	12	" "	
White Squall....	7	5	" yacht.	
Monaco .....	10	6	" "	
Nora.. ....	28	19	" tug.	
Richelieu .....	167	87	Paddle Passenger.	Not in commission.
Jessie.....	19	13	Screw tug.	
Ballantyne.....	14	6	Paddle tug.	
Quinze.....	32	26	Twin screw tug.	
John Thompson...	5	4	Screw yacht.	
H. Trudel....	13	5	Paddle tug.	
Maid of the Mill.....	8	6	Screw "	
Owl.....	4	3	" yacht.	
Union .....	75	66	" passenger.	
Juno.....	17	7	" yacht.	
Nama.....	41	36	" "	
Lyon, C.....	19	13	" tug.	No application.
Willie, C.....	8	6	" "	
Annie, C.....	6	4	" passenger.	
St. Louis.....	29	20	" yacht.	
Lady of the Lake ..	607	369	Paddle passenger.	
Massawippi....	4	3	Screw "	
John A.....	20	13	" tug.	
Dandy.....	46	31	" "	
E. G. Laverdure.....	54	49	" "	
Florida .....	201	128	Twin screw frt.	
Chateauguay.....	222	119	Paddle passenger.	
R. Anglin.....	97	52	Screw freight.	
Robert Stoker.....	14	2	" tug.	Not yet inspected.
Gertie.....	21	14	" "	
Nokomis.....	25	17	" yacht.	
Aid.....	25	15	" tug.	
Total. ....	2,016	1,244		

WM. LAURIE,  
LOUIS ARPIN.



STEAM Vessels inspected for the Year ended June 30, 1903.  
QUEBEC DIVISION.  
BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where Employed.
		1902.		\$ cts.	
Dolley .....		Nov. 1..	5	5 24	Pleasure yacht, Quebec.
		1903.			
Spray.....		May 15..	107	13 56	Screw, tug, Montreal and Quebec.
Batiscan.....		" 15..	40	8 20	Paddle, Batiscan and Quebec.
		1902.			
Kathleen.....	40	Nov. 1..	280	30 40	" Pass, Grosse Ile and Quebec.
		1903.			
Fabiola.....		May 15..	81	11 48	Steam Wrecking Sch'r Quebec & Gulf.
Spray of Quebec.....		" 15..	21	6 68	Screw, tug, Quebec.
Queen.....	450	July 15..	367	37 36	" winter ferry, Quebec and Levis
Maud.....		Aug. 15..	50	9 00	Paddle, tug, St. Maurice.
St. Pierre (dredge).....		" 15..		5 00	" "
Mabel McDonald.....		May 15..	42	8 30	Screw, tug, Three Rivers.
No. 6 dredge.....		" 15..	100	13 00	Paddle, pass. "
Roberval.....		June 15..	126	18 08	" " Roberval and Paribonca.
Marie Louise (Public Works Dept.).....					Screw, tug.
		1902.			
Admiral.....		Nov. 15..	682	62 56	Paddle, pass., Gaspé and Dalhousie.
		1903.			
Fearless.....		July 1..	10	5 80	Screw, tug, Pabos.
Bella.....		" 1..	43	8 44	Paddle, ferry, Cross Pt. & Campbellton
Christiana.....		" 1..	57	9 56	" tug, Restigouche.
Oak Bay.....		" 1..	27	7 16	" " "
Le Brochu.....		" 6..	19	6 52	Screw " Lake Metapedia.
Maria.....		" 8..	31	7 48	" " Quebec and Portneuf.
Randolphe.....		" 8..	17	6 36	" " Batiscan River.
Duke of York (dredge).....		" 8..	100	13 00	" " "
J. Paul.....		" 1..	20	6 60	" " Sorel and Montreal.
Carmelia.....		" 1..	63	10 02	" " " "
Alcyon.....		" 1..	44	8 52	" ferry, Ste. Anne & Chicoutimi.
Marie Louise.....		" 1..	99	12 92	Paddle, tug, Saguenay River.
Forest.....		" 1..	26	7 08	Screw " " "
Nord.....		" 1..	56	19 48	" pass., Roberval & Paribonca.
St. Louis de Matebat-chouan.....		" 1..	17	6 36	" tug, Lake St. John.
Kenogami.....		Aug. 1..	21	6 68	" " Saguenay.
Thor.....		" 1..	323	30 84	Paddle, tug, Saguenay River.
Alpha.....		" 1..	16	6 28	Screw " Quebec.
Muriel.....		Sept. 1..	64	10 12	" " Saguenay River.
Activity.....		May 1..	22	6 76	" " Berthier River.
Nithsdale (dredge).....		" 1..		5 00	Dredging in Berthier.
Macannamac.....		Aug. 1..	4	5 30	Screw, yacht, Spider lake.
Jubilee.....	30	" 1..	25	7 00	" pass., Mégantic & Three Rivers
Campania.....		" 1..	23	6 84	" tug, Lake Mégantic.
L'Ami.....		" 1..	16	6 28	" " " Aylmer.
Honkedore.....		" 1..	6	5 44	" " " St. Francis.
Dot.....		" 1..	10	5 80	" " " "
Amanda.....		" 21..	11	5 88	" " Quebec Harbour.
Jack.....		Sept. 1..	31	7 48	" " St. Thomas and Quebec.
Manicouagan.....		" 1..			" " Manicouagan.
Polaris.....	450	" 1..	533	50 64	" winter ferry, Quebec and Lévis



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
Pilot.....	450	Sept. 1..	426	42 08	Screw, winter ferry Quebec and Lévis
St. Henry.....		Aug. 1..	101	13 08	" tug, Lake St. John.
		1904.			
Savoy.....	25	May 1..	348	35 84	" pass., freight, Anticosti & Que.
Greetland.....	40	" 1..	1,091	95 28	" " Mont. & St. John, N.B.
Florence (schooner).....		" 1..	133	15 64	" wrecking sch'r, Mont. & Gulf.
King Edward.....	150	" ..	355		" pass., Mont. & lower ports.
Terrebonne.....	450	May 1..	636		Paddle, pass., Mont. & Contrecoeur.
Fire Fly.....	40	" 1..	214		" " " Berthier.
Berthier.....	600	" 1..	937		" " " Three Rivers.
Sorel.....	250	" 1..	158		" " " Beauharnois.
Carmelia.....		" 1..	63	10 04	Screw, tug, Montreal Harbour.
Chambly.....	600	" 1..	538		Paddle, pass., Montreal and Chambly.
Spray.....		" 1..	107	13 56	Screw tug, St. Lawrence river.
Laprairie.....	350	" 1..	600		Pad. pass., Mont. & Laprairie.
Gov't Spoon Dredge.....		" 1..			St. Lawrence River.
Cartier.....		" 1..			Govt. str. attending dredge.
St. Jean Iberville.....		" 1..			" " "
St. Francis.....		" 1..	59		" " "
Frontenac.....		" 1..			" " "
Jessie Hume.....		" 1..			" " "
Champlain.....		" 1..			" " "
Lac St. Pierre.....		" 1..			" " "
de Lévis.....		" 1..			" " "
Saguenay.....	453	" 15..	992		Pad. pass., Quebec and Chicoutimi.
Canada.....	600	" 1..	2,010		" " " Montreal.
Emelia.....		" 1..			Str. attending dredge and survey.
Nithsdale, (dredge).....		" 15..			Dredging in Berthier river.
Activity.....		" 15..			Screw tug, " "
Julia.....		" 1..	91	12 28	" St. Lawrence river.
Ethel.....		" 1..	72	10 76	" " "
Chipmunk.....		" 1..	20	6 60	Screw pleasure yacht.
Beaupré.....	800	" 1..	2,068		Pad. pass., Montreal and St. Anne.
J. Paul.....		" 1..	20	6 60	Screw tug, St. Lawrence river.
W. O. Francis.....		" 1..	37	7 96	" " "
South.....	450	" 1..	349		Pad. ferry, Quebec and Lévis.
Gaspésien.....		" 14..	490	47 20	Screw pass., Montreal and Gulf
Mary.....	15	" 16..	108	16 64	" " Quebec " "
Contest.....		" 10..	274	29 92	Pad. " " "
City of London.....	250	" 14..	516	49 28	Screw ferry, P. E. Island.
North.....	450	" 17..	289		Pad. ferry, Quebec and Lévis.
Douro.....	200	" 17..	432	42 56	Screw pass., Quebec and Gulf.
Queen.....	200	" 17..	332	34 56	Screw ferry, St. John, N. B.
Alpha.....		" 18..	20	6 60	Screw tug, St. Lawrence river.
Victoria.....		" 18..	48		" " " "
Frank Jackman.....		" 21..	39	8 12	" " " "
M. E. Hackett.....		" 2..	78		" " " "
Two Brothers.....		" 1..	23		" " " "
Lord Strathcona.....	25	" 1..	49		Twin scr. tug and 25 pass. Mont. & foreign
Carolina.....	600	" 1..	968		Pad. pass., Mont. and Chicoutimi.
Rodolphe.....		" 1..	116		Pad. tug, Sorel and Three Rivers.
Quebec.....	800	" 1..	3,056		Pad. pass., Quebec and Montreal.
Algerian.....	400	" 1..	914		" " Montreal and Toronto.
Trois Rivières.....	600	" 1..	1,552		" " " Three Rivers.
Hudson.....		" 1..	158	17 64	" tug, Quebec and Montreal.
Fred, (ex Asilda).....		" 1..	24		Screw tug, Montreal and Lakes.
May, (ex W. C. Loggie).....		" 1..	21		" " " Harbour.
McNaughton.....		" 1..	137		" " " and Lakes.
Rival.....		" 15..	125		Pad. " " and Quebec.
Sincennes.....		" 16..	228		" " " " "
Alice.....		" 16..	67	10 36	Screw " " Harbour.



STEAM Vessels Inspected, &c.—Quebec Division.—Continued.

BOILERS AND MACHINERY.—Continued.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where Employed,
		1904.		\$ cts.	
Prefontaine.....	40	May 18..	889		Screw pass., Montreal and Quebec.
St. Croix.....	550	" 15..	505	48 48	Pad. " " " "
Virginia.....	600	June 1..	1,701		" " " " Chicoutimi.
Fabiola.....		May 1..	81		Wrecking schr., Gulf and Montreal.
Etoile.....	591	" 1..	360		Pad. pass., Mont. and Quebec.
Victoria.....		June 1..	343		Screw " " and Chambly.
Cultivateur.....	751	May 1..	687		Pad. ferry, " and St. Hélène Is.
Matilda.....		" 1..	113		Screw tug, " Harbour.
Virginia (tug).....		" 1..	146		" " St. Lawrence river.
Belle.....		" 18..	51	9 08	" " " "
Hamilton.....		" 22..	938		P. frgt., Montreal and Hamilton.
Columbian.....	500	" 22..	884		T. S. pass. " and Toronto.
Bohemian.....	400	" 23..	1,107		Pad. pass. " " "
C. W. Jones.....		" 23..	48		S. tug, Sorel Harbour.
Trenton (Dredge).....		" 24..	100		Dredging in Sorel.
I. L. X.....		" 24..	100		" " "
Polaris.....	450	June 1..	553		S. Winter ferry Quebec and Levis.
Diver.....		" 4..	86		S. wrecking schr. Quebec and Gulf.
St. Louis.....	555	" 17..	428		P. pass. Montreal, Quebec and Gulf.
E. B. Eddy.....		" 18..	78	11 24	S. tug, Quebec and Lakes.
Francis H.....		" 13..	17		" " Harbour.
St. Roch.....		" 15..	18		" " "
Spray.....		" 17..	24	6 92	" St. Lawrence River.
Foam.....		" 20..	16	6 28	" Quebec Harbour.
Hope.....		" 20..	19	6 52	" " "
Ripple.....		" 20..	13	6 04	" " "
Leilley H.....		" 24..	19		" " and River du Loup.
Wobun.....		" 25..	1551		" frgt. Montreal and foreign ports.
Samson.....		" 5..	94		S. s. pass. Grande Piles and Latuque.
St. Maurice.....		" 6..	45		S. pass. " " "
High Rock.....		" 6..	8		S. tug " " "
Florence.....		" 8..	18		" " " "
Dream.....		" 8..	27		S. pass. " " "
St. Louis.....		" 8..	17		S. tug " " "
Beatrice.....		" 6..	40		" Trois Rivières.
Dredge No. 5....		" 1..	100		Dredging in Three Rivers.
Mabel McDonald ..		" 1..	42		S. tug, St. Lawrence River.
Como.....	40	" 8..	75		Pad. pass. Three Rivers and Nicolet.
Blandford.....		" 8..	65		P. tug, St. Maurice River.
Bourgeois.....		" 8..	94		Pad., ferry, Nicolet and Three Rivers.
Glacial.....		" 8..	109		S. " Sr. Angele & Three Riv.
Mary A. Laughline...		" 8..	23		S. tug attending dredge.
Dredge No. 4.....		" 9..	100		
Corine.....		" 1..	23		S. tug, Quebec Harbour.
St. Charles.....		" 1..	23	6 84	" " "
Alma.....		" 25..	43		Excursion boat.
Marie Josephine..		April 13..	117		S. wrecking schr. Montreal and Gulf.
Polino.....	30	May 1..	807	72 56	S. pass., Montreal and Newfoudland.
Frontenac.....	400	" 1..	304	32 32	T. S. ferry, Quebec and St. Romuald.
Champion.....	612	" 1..	482	46 56	P. pass, " Berthier.
Orleans.....	530	" 1..	269	29 52	S. " " Orleans Island.
Campana.....	400	April 11..	1697	143 76	T. S., pass., Mont. & Pictou N. S.
Rhoda.....	150	" 13..	182	22 56	Pad. mail tender, Rimouski.
Shamrock.....		May 1..	237		S. attending Buoys.
Total.....			41,486	\$1,511 84	

JOS. SAMSON,  
Boiler and Machinery Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels not inspected for the Year ended June 30, 1903.

QUEBEC DIVISION.

BOILERS AND MACHINERY

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks.
			Why not Inspected and Class of Vessel.
Adriatic . . . . .	156	87	Laid up for want of employment.
Atlantic . . . . .	564	283	" " "
Victor . . . . .	35	18	Inspected since.
Mersey . . . . .	56	34	Ins. since & sunk off Manicouagan shoal.
Marie Alma . . . . .	52	36	Laid up for want of employment.
Beaver . . . . .	273	104	" " "
Ivan R . . . . .	18	12	" repairs.
Dama . . . . .	54	37	Inspected since.
Charlevoix . . . . .	212	144	Laid up for want of employment
Albatros . . . . .	21	14	Not running.
Total . . . . .	1,441	769	

JOS. SAMSON,  
Boiler and Machinery Inspector.

STEAM Vessels inspected for the Year ended June 30, 1903.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Bella Ritchie . . . . .	125	July 1.	69	10 52	Paddle, Montreal & Beauharnois.
Bonenfant . . . . .	25	" 1..	31		Screw, Charlemagne & Bout de L'Isle.
*Charlevoix . . . . .			212	24 96	
Lady of the Lake . . . . .	700	July 11	607	56 56	Paddle, Newport & Georgeville.
Anny C . . . . .	10	" 11..	6	5 48	Screw, on Lake Magog.
Mississippi . . . . .	10	" 11..	4	5 32	" " Mississippi.
Maud . . . . .	350	" 12..	269	29 52	Paddle, Montreal & Ottawa.
*Ida . . . . .			247	27 76	
Spray . . . . .	15	July 15..	21	6 68	Screw, Quebec Harbour.
Belle . . . . .	40	" 16..	51	9 08	" "
J. H. Hacket . . . . .	25	" 16..	117	17 36	" "
M. E. Hacket . . . . .	40	" 16..	78	11 24	" "
Admiral . . . . .	250	Aug. 8..	682	62 56	Paddle, Dalhousie & Gaspé.
Bella . . . . .	10	" 9..	43	8 41	" Campbellton & Cross Point.
Salaberry . . . . .	40	" 20..	222	25 76	Screw, Montreal & Valleyfield.
*Chaffey . . . . .					Paddle, laid up.
Marie Louise . . . . .	30	Aug. 26..	99	12 92	" Chicoutimi & St. Anne.
Acyone . . . . .	20	" 26..	41	8 52	Screw " "
Mistasini . . . . .	40	" 27..	495	47 60	Paddle, Roberval & Gr. Décharge.
Peribonca . . . . .	40	" 27..	179	22 32	" on Lake St. John.
Le Colon . . . . .	40	" 27..	173	21 84	" "

\* Unfit to carry passengers.



STEAM Vessels Inspected, &c.—Quebec and Montreal Division—Continued.

HULL INSPECTION—Continued.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Nord.....	30	Aug. 27..	56	9 48	Screw, Roberval & Peribonca.
Roberval.....	50	" 27..	126	18 08	Paddle " "
Lord Strathcona .....	50	" 30..	495	47 60	Screw, Montreal & Foreign Ports.
Kathleen.....	40	Sept. 2..	280	30 40	Paddle, Quebec & Grosse Ile.
Jubilee.....	30	" 16..	25	7 00	Screw, Lake Mégantic & Wobun.
Polaris.....	450	Oct. 6..	533	50 64	" Quebec & Lévis.
Pilot.....	450	" 8..	426	42 08	" "
Queen.....	450	" 9..	367	37 36	" "
		1904.			
Savoy . . . . .	25	April 11..	348	34 84	Screw, Montreal & Foreign Ports.
Campana. . . . .	400	" 15..	1,697	143 76	" " Pictou.
Rhoda.....	150	" 13..	182	22 56	Paddle, Quebec & Rimouski.
Greetlands.....	40	" 16..	1,091	95 28	Screw, Montreal & St. Johns, N.F.L.
Douro.....	200	" 17..	432	42 57	" Quebec & Sydney.
Queen.....	200	" 18..	332	34 56	" St. John & tributaries.
City of London.....	250	" 17..	516	49 28	" Charlottetown & Crapaud.
Mary.....	18	" 21..	108	16 64	" Quebec & Gaspé.
Polino.....	30	" 27..	807	72 56	" Montr., Sydney & St. J., N.F.L.
Berthier.....	600	" 28..	934		Paddle " & Three Rivers.
Mouche a feu. ....	40	" 29..	214		" Sorel & Berthier.
Sorel.....	250	" 29..	158		" Montreal & Beauharnois.
Chambly.....	600	" 10..	535		" " Chambly.
Canada.....	600	" 10..	1,768		" " Quebec.
Laprairie.....	350	" 10..	600		" " Laprairie.
Orlean.....	530	" 14..	269	29 52	Screw, Quebec & Orleans Island.
Gaspesian. ....	40	" 14..	490	47 20	" Montreal & Gaspé.
Frontenac.....	555	" 17..	304	32 32	" Quebec & St. Romuald.
Beaupre (ex Montreal)	800	" 20..	2,068		Paddle, Montreal & Ste. Anne.
Saguenay.....	443	" 20..	992		" " Chicoutimi.
South.....	450	" 20..	349		" Quebec & Lévis.
North.....	450	" 21..	289		" "
Champion.....	612	" 22..	482	46 56	" Quebec & Berthier.
Terrebonne.....	450	" 24..	316		" Montreal & Sorel.
Longeuil.....	300	" 25..	365		" " Longueuil.
Hochelaga.....	600	" 25..	419		" Hochelaga & Boucherville.
St. Laurent.....	257	" 25..	548		" Montreal & Berthier.
Lord Strathcona . . .	30	" 29..	495		Screw, " & Foreign Ports.
St. Croix.....	550	May 2..	506	48 48	Paddle, Quebec, Ste. Croix.
Etoile. ....	591	" 2..	560		" " & Montreal.
Contest.....	150	" 6..	274	29 92	" " & Grosse Isle.
Prefontaine.....	40	" 7..	889		Screw, Montreal & Quebec.
Quebec.....	800	" 15..	2,656		Paddle " "
Carolina.....	600	" 15..	969		Pad., Montreal and Chicoutimi.
Cultivateur.....	751	" 15..	362		" " and St. Helen Island.
Trois Rivières .....	600	" 15..	1,552		" " and Trois Rivières.
Victoria.....	30	" 15..	343		Screw, Montreal and St. John, P.Q.
Corsican.....	400	" 17..	946		Pad., Montreal and Hamilton.
Welchman.....	25	" 17..	156		Screw, Montreal and Ottawa.
Chateauguay.....	440	" 17..	222		Pad., Montreal and Chateauguay.
Valleyfield.....	450	" 17..	417		" Montreal and Valleyfield.
Duchess of York.....	700	" 18..	490		" Montreal and Carillon.
Salaberry.....	40	" 18..	222		Screw, Montreal and Valleyfield.
Princess.....	200	" 18..	527		Pad., Montreal and Carillon.
Bonenfant.....	25	" 18..	31		Screw, Charlemagne and Bout d'Isle.
Victoria.....	300	" 19..	181		Screw, Ottawa and Thurso.
Empress.....	800	" 19..	678		Pad., Ottawa and Grenville.
Mansfield .....	15	" 20..	169		Screw, Ottawa and Hull.
G. B. Greene.....	600	" 20..	255		Pad., Ottawa and Deschenes Lake.
Beatrice B. ....	40	" 20..	40		Screw, Aylmer and Britannia.
Pontiac.....	230	" 21..	116		Pad., on Chats Lake.
Leon.....	15	" 22..	15		Screw, High Rock & N. Dame de Laus.



## SESSIONAL PAPER No. 21

Steam Vessels Inspected, &c.—Quebec and Montreal Division—*Concluded.*HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and Where employed.
		1904.		\$ cts.	
Mildred .....	25	May 22..	15	.....	Screw, Buckingham and High Rock.
Agnes .....	40	" 22..	29	.....	" " "
Leo .....	20	" 24..	2	.....	" Hawkesbury and Grenville.
Bonito.. ..	30	" 24..	17	.....	" Calumet and L'Orignal.
Glide .....	40	" 24..	80	.....	" Calumet and Hawkesbury.
John .....	40	" 25..	35	.....	Pad., Carillon and Point Fortune.
Sovereign.....	700	" 25..	636	.....	" " Montreal.
Hosanna.....	40	" 26..	89	.....	Screw, Montreal and Longueuil.
Olive.....	60	" 26..	151	.....	" " Ottawa.
Bohemian .....	375	" 30..	628	.....	Pad., Montreal and Prescott.
Armenia.....	*	" 30..	467	.....	Screw, Montreal and Lake Ontario.
Garnet.. ..	200	" 29..	385	.....	Pad., Montreal and Cornwall.
Belle .....	40	June 8..	59	.....	Screw, Quebec Harbour.
Spray .....	15	" 8..	21	.....	" " "
King Edward.....	150	" 8..	355	.....	" Mont., Matasquan and Gaspé.
M. E. Hackett.....	40	" 8..	78	.....	" Quebec Harbour.
Columbian.....	500	" 8..	884	.....	" Montreal and Toronto.
Algerian.....	400	" 8..	914	.....	Pad., Montreal and Hamilton.
Virginia.....	600	" 8..	1,701	.....	" " Chicoutimi.
Queen.....	40	" 20..	15	.....	Screw, on Lake Nipissing.
Sparrow .....	40	" 20..	38	.....	" " "
Van Woodland .....	100	" 20..	37	.....	" " "
Booth .....	40	" 20..	347	.....	Pad., " "
Empress.....	25	" 20..	36	.....	Screw, Sturgeon Falls and Rivers.
Fleur de Mai .....	†	.....	7	.....	" " "
Dorothy.....	10	June 20..	10	.....	" Lake Nipissing and Rivers.
Verva .....	40	" 22..	55	.....	" Wahnapiatae.
D. B. Mulligan.. ..	40	" 22..	77	.....	" Pembroke and Calumet.
Mahigama .....	40	" 22..	20	.....	" " Fort William.
Victoria .....	400	" 22..	188	.....	Pad., " St. Joachims.
Hudson .....	40	" 23..	45	.....	" Barry's Bay and Palmers.
Hall.....	50	" 23..	247	.....	Screw, Montreal and Ottawa.
Robert McKay .....	150	" 24..	129	.....	" Montreal Harbour.
Aberdeen .....	150	" 24..	87	.....	" " "
Filgate.....	400	" 20..	425	.....	Pad., Montreal Harbour & Cornwall.
Ida.....	40	" 24..	247	.....	Screw, " Ottawa.
Spartan .....	400	" 24..	946	.....	Pad., " Hamilton.
Chaffey.....	40	" 25..	42	.....	Screw, Valleyfield and Lancaster.
Maud .....	200	" 15..	269	.....	Pad., Montreal and Ottawa.
Hamilton .....	375	" 15..	938	.....	" " Toronto.
Wobun.....	*	" 29..	1,552	.....	Screw, Montreal and foreign ports.

\* Freight.

† Unfit to carry passengers.

PHILIPPE DUCLOS,  
Hull Inspector.



STEAM Vessels not Inspected for the Year ended June 30, 1903.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.	
			Why not inspected and Class of	Vessel.
Richelieu . . . . .	113·38	71·43	Paddle passenger,	not running.
Kathleen . . . . .	230·38	176·64	"	unfit for running.
St. Louis . . . . .	427·57	269·55	"	inspected since.
Samson . . . . .	95·55	63·61	Screw passenger	"
St. Maurice . . . . .	44·72	30·41	"	"
Coma . . . . .	75·11	47·32	Paddle passenger	"
Glacial . . . . .	109·00	74·00	Screw	"
Bourgeois . . . . .	94·34	59·44	Paddle	"
Maria Louise . . . . .	5·66	5·01	Screw	"
Ivan R. . . . .	18·29	12·44	"	in construction.
Arthur . . . . .	14·98	12·24	"	unfit for running.
Adriatic . . . . .	156·03	87·29	"	not running.
Atlantic . . . . .	565·03	282·80	"	unfit for running.
Charlevoix . . . . .	212·38	67·96	"	freight, not running.

PHILIPPE DUCLOS,  
*Hull Inspector.*



SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the year ended June 30, 1903.

## NOVA SCOTIA DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Highland Mary...		July 3..	73 73	10 92	Screw, lighter, coasting.
L. Boyer .....	100	" 4..	60 00	9 80	" passenger, Halifax Harbour.
Robbie Burns .....		" 5..	88 95	12 12	" lighter "
Commodore .....	30	" 8..	12 84	6 04	" passenger "
I. C. U. ....	10	June 6..	3 58	5 32	" " Annapolis Basin.
Millie R. ....		May 14..	19 85	6 60	" tug, coasting.
Star. ....	15	July 18..	6 07	5 48	" passenger, Wallace Harbour.
Malcolm Cann. ....	100	" 21..	211 81	24 96	" " coasting.
Iona. ....	22	" 22..	54 27	9 32	" " Sydney and Canso.
Marion .....	400	" 22..	478 49	46 24	Paddle " Bras d'Or Lakes.
Alameda .....	40	" 23..	62 59	10 04	Screw " Mira River.
Marietta. ....	19	" 23..	7 04	5 56	" " "
Vesta .....		" 23..	9 21	5 72	" tug "
Zulieka .....		" 23..	12 38	5 96	" " "
Elenor M. Cates .....		" 24..	58 81	9 72	" " coasting.
Eldon .....		" 25..	37 81	8 04	" " "
Clayton .....	40	May 14..	42 62	8 44	" passenger, Avon River & Bay.
Susie .....	40	" 14..	26 83	7 16	" " "
Rescue .....		Aug. 14..	124 09	14 92	" freight, coasting.
Bessie & Harry .....		" 15..	22 49	6 76	" water boat, Halifax Harbour.
Aid .....		" 22..	98 55	12 84	" freight, coasting.
St. Michael .....	15	" 26..	39 20	8 12	" pass., Liverpool and Shore.
Arbutus .....		" 26..	46 76	8 76	" tug, coasting.
Maggie .....	38	" 27..	19 26	6 52	" pass., Lunenburg and South.
Carrie .....	40	" 27..	14 83	6 20	" " Chester and Mahone.
Mascotte .....	25	" 27..	35 40	7 80	" " Lunenburg & Shore Ports
Collector .....	40	" 30..	52 02	9 16	" " Halifax and Bedford.
Cygnets .....		Sept. 2..	11 23	5 88	" fish boat, coasting.
Yuba .....	25	Aug. 1..	12 04	5 96	" pass., Barrington Harbour.
Henry Hoover .....		Sept. 2..	54 64	9 40	" tug, coasting.
Anticosti .....		" 3..	19 00	6 52	" fish boat, coasting.
Gambrinus .....		" 3..	28 36	7 24	" lighter, Halifax Harbour.
Elsie .....		" 6..	22 14	6 76	" tug, coasting.
Albion .....		" 8..	9 14	5 72	" " Moser's River.
Salvor .....		" 10..	44 93	8 60	" lighter, Halifax Harbour.
Lady Glover .....	25	" 12..	137 51	19 04	" passenger, coasting.
Lunenburg .....	175	" 20..	265 55	29 28	" " "
Ralph E. S. ....		Oct. 10..	27 82	7 24	" fish boat "
Annie .....		" 21..	42 12	8 36	" water boat, Halifax Harbour.
Bridgewater .....	225	" 28..	207 79	24 64	" passenger, coasting.
Wilfred C. ....	60	" 30..	99 26	12 92	" " "
La Have .....		Nov. 13..	49 27	8 92	" tug "
Wanda .....		" 18..	38 48	8 04	" " "
Harbinger .....	39	" 19..	108 56	13 72	" passenger "
Westport .....	125	" 19..	80 09	11 40	" " "
Edna R. ....		" 20..	49 66	8 92	" tug "
Nereid .....		" 20..	12 24	5 96	" fishing boat "
Ida Lue .....		" 20..	44 51	8 60	" tug "
Yankee .....		" 20..	7 31	5 56	" fishing boat "
Loretta .....		" 20..	12 02	5 96	" tug, Tusket River.
Goliath .....	17	" 22..	146 83	19 76	" passenger, coasting.
Halifax .....	250	" 25..	338 42	35 04	Paddle, ferry, Halifax Harbour.
Alpha .....		Dec. 8..	61 20	9 88	Screw, freight, coasting.
Pekin .....		" 1..	84 91	11 80	" " "
Messenger .....		" 22..	111 53	16 96	" " "
		1904.			
Dolphin .....		Jan. 15..	8 07	5 64	" fish boat "
Newfoundland .....		Feb. 14..	918 75	78 52	" freight, foreign.
Harlaw .....	60	" 25..	451 36	44 08	" passenger, coasting.
J. L. Nelson .....	20	Mar. 11..	37 84	8 04	" " "



STEAM Vessels Inspected, &c.—Nova Scotia Division—*Concluded.*

BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1904.		\$ cts.	
Lenore .....		Mar. 18..	15 23	6 30	Screw, fish boat, coasting.
Island Gem .....	40	" 19..	15 62	6 28	" passenger, Yarmouth Harbour
Edna R. ....		" 19..	49 66	8 92	" tug, coasting.
Florence C. ....		" 24..	38 98	8 12	" freight "
Mable R. ....		" 27..	15 20	6 20	" fish boat "
Victor .....		April 8..	26 86	7 08	" freight, coasting.
Flash .....	15	" 11..	7 79	5 64	" passenger, Halifax harbour.
City of Ghent .....	60	" 17..	198 64	23 92	" " coasting.
Anita .....		" 6..	26 50	7 16	" fish boat "
Coban .....	37	" 17..	1,063 30	93 04	" passenger, foreign.
Louisburg .....		" 15..	1,815 60	150 28	" freight "
Halifax .....	500	" 21..	1,874 88	158 00	" passenger "
Helen May Butler .....		" 23..	66 98	10 56	" freight, coasting.
Percy Cann .....	140	" 28..	80 06		" passenger "
La Tour .....	60	" 29..	154 43		" " "
Gertrude M. ....	35	" 29..	47 58		" " "
Amphitrite .....		May 2..	149 45		" freight "
Richard .....		" 5..	465 60		" " "
Bonavista .....	50	" 5..	1,306 33		" passenger, foreign.
F. W. Roebeling .....	35	" 5..	161 97		" " coasting.
Trusty .....	100	" 11..	57 60		" " La Have river
Mikado .....	17	" 12..	43 94		" " Halifax harbour.
Rescue .....		" 13..	124 09		" freight, coasting.
Marion .....	37	" 18..	10 30		" passenger, Pictou harbour.
Arcadia .....	37	" 18..	61 64		" " coasting.
May Queen .....	25	" 19..	35 92		" " Pictou harbour.
Gladiator .....		" 20..	70 40		" tug, coasting.
Diamond .....		" 20..	22 65		" " Sydney harbour.
Fairy .....		" 20..	16 06		" water boat, Sydney harbour.
Peerless .....	300	" 30..	94 27		" passenger " "
Douglas H. Thomas .....	18	" 21..	211 91		" " coasting.
Weymouth .....	100	" 22..	153 93		" " "
Merrimac .....	22	" 22..	85 80		" " "
Sea Bird .....		" 22..	41 28		" fish boat "
Pawnee .....	450	" 22..	106 50		" passenger, Bras d'Or lakes.
Blue Hill .....	140	" 23..	195 83		" " "
Fred. L. M. Paint .....	37	" 23..	88 18		" " Strait of Canso.
Nelson .....	100	" 23..	64 34		" " Bras d'Or lakes.
Vulcan .....		" 23..	18 40		" tug, coasting.
Meadow Flower .....		" 23..	6 56		" water boat, Canso harbour.
John L. Cann .....	125	" 24..	165 55		" passenger, coasting.
Zaidee .....		" 25..	18 63		" water boat, Sydney harbour.
Daisy .....		" 25..	10 74		" " "
Gipsy .....		" 25..	16 70		" tug " "
Dartmouth .....	435	June 1..	311 23		Paddle, ferry, Halifax harbour.
Bruce .....		" 1..	55 70		Screw, lighter " "
A. C. Whitney .....		May 15..	62 67		" tug, coasting.
Falmouth .....		June 8..	43 03		" " Avon river.
Evangeline .....	150	" 8..	69 18		" passenger, Avon river.
Chester .....		" 8..	79 50		" tug "
Rona .....		" 10..	70 05		" " coasting.
Albatros .....		" 10..	31 38		" yacht "
Freddie V .....		" 10..	26 69		" tug "
I. B. Hambley .....	100	April 4..	31 71		" passenger, Halifax harbour.
Acadia .....	100	" 21..	74 21		" " "
Petrel .....	20	June 29..	6 36		" " "
Pastime .....	175	" 17..	67 71		" " "
Totals .....			15,293 86	1,234 28	

J. P. ESDAILE,  
*Steamboat Inspector, Halifax, N. S.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended  
June 30, 1903.

## NOVA SCOTIA DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Dahome . . . . .	70	Aug. 9..	2,469·74	205 60	Screw, passenger, foreign.
Chebucto. . . . .	400	" 9..	578·48	54 24	" " Halifax harbour.
Pro Patria . . . . .	60	" 14..	759·01	68 72	" " foreign.
Ocamo. . . . .	75	" 22..	1,826·64	154 16	" " "
Beta . . . . .	75	Sept. 10..	1,086·67	94 96	" " "
Oruro . . . . .	150	" 15..	1,919·07	161 52	" " "
		1904.			
Glencoe . . . . .	100	Jan. 6..	767·09	69 36	Screw, passenger, foreign.
Britannic. . . . .		Feb. 10..	2,302·45	189 16	" freight "
Terje Viken. . . . .		" 27..	3,579·68	291 40	" " "
Universe . . . . .		Mar. 25..	2,535·51	207 88	" " "
Amelia. . . . .	230	April 6..	356·58	36 56	" passenger, coasting.
Silvia . . . . .	115	" 21..	1,707·70	144 64	" " foreign.
Prince George . . . . .	600	" 30..	2,040·14	171 20	" " "
Alert . . . . .		May 20..	105·39	13 40	" tug, coasting.
Elaine . . . . .	300	" 21..	272·08	29 76	" pass. "
C. M. Winch. . . . .		" 21..	87·72	12 04	" tug "
Bruce . . . . .	300	" 26..	1,154·59	100 40	" passenger, foreign.
Prince Arthur . . . . .	600	June 11..	2,041·44	171 28	" " "
Olivette . . . . .	450	" 15..	1,678·17	142 24	" " "
Total . . . . .			27,268·05	2,318 52	

J. P. ESDAILE,  
Steamboat Inspector, Halifax, N. S.



STEAM Vessels not Inspected for the Year ended June 30, 1903.

NOVA SCOTIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.	
			Why not Inspected and Class of Vessel.	
Tusket.....	3·04	2·00	Laid up, tug.	
Alida.....	64·18	28·52	" "	
Gem.....	4·67	2·12	" fishing boat.	
Havana ..	470·18	245·86	" passenger.	
Maple Leaf.....	129·06	81·31	" ferry boat.	
Volunda: . . . .	29·80	13·96	" yacht.	
Jessie Grey.....	76·01	47·93	" lighter.	
Bessie ..	10·45	5·74	" passenger.	
Victor .....	9·62	6·41	" tug.	
David Duncan .....	20·59	10·59	" "	
Lennox .....	66·29	41·76	" ferry boat.	
Lion ...	19·82	13·48	" tug.	
Dolphin .....	12·78	8·69	" "	
Oneita .....	14·96	10·18	" fishing boat for new boiler.	
Yarmouth .....	1,451·92	724·66	" passenger.	
Avon .....	64·66	41·39	" " for new boiler.	
W. M. Weatherspoon. . . . .	59·29	34·41	Not yet inspected, tug.	
Vega ..	132·22	82·82	Laid up, repairing hull, passenger.	
Active .....	59·91	21·50	Not yet inspected, tug.	
Hygeia.....	57·69	39·23	Laid up for new boiler, passenger.	
Markland .....	21·92	14·91	Not yet inspected "	
Tourist .....	4·42	3·33	Laid up, repairing boiler "	
Juno .....	9·29	2·21	" " hull. "	
Boston.....	1,694·50	733·77	" passenger.	
Marina .....	32·46	16·29	Not yet inspected, tug.	
Centreville. . . . .	59·71	32·48	" " "	
Glencoe.....	32·21	24·53	" " passenger.	
Ulala.....	13·70	3·35	" " yacht.	
Alexandra.....	33·67	22·90	" " "	
Shannon.....	75·11	51·07	" " tug.	
Total.....	4,734·15	2,368·70		

J. P. ESDAILE,  
Steamboat Inspector, Halifax, N. S.



## SESSIONAL PAPER No. 21

## STEAM Vessels Inspected for the Year ended June 30, 1903.

## NOVA SCOTIA DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
L. Boyer . . . . .	100	July 3..	60·00	9 80	Screw, passenger and tug, Halifax Harbour, Screw Ferry.
I. B. Hamblin . . . . .	100	" 3..	37 71	7 56	Screw, pass. and tug, Halifax Harbour
I. C. U . . . . .	10	" 10..	3·56	5 32	" " " Digby Basin
Commodore . . . . .	30	" 11..	12·84	6 04	" " Halifax Harbour.
Susie . . . . .	40	" 15..	26·83	7 16	" " Avon river.
Clayton . . . . .	40	" 15..	42·62	8 44	" " and freight, Parrsboro and Bay of Fundy.
Marion . . . . .	400	" 22..	478·49	43 28	Paddle, passenger and freight, Sydney and Bras d'Or Lakes.
Iona . . . . .	400	" 22..	54·27	9 32	Tug and pass., L'pool, N.S. and coast.
Marietta . . . . .	29	" 23..	7·04	5 56	Screw, excursion, Mira river.
Alameda . . . . .	40	" 23..	62·59	10 04	Minor waters, N.S. & P.E.I., scr. ferry
Malcom Cann . . . . .	90	" 25..	211·81	24 96	Mulgrave & coast, screw pass. & tug.
Yuba . . . . .	25	Aug. 1..	12·04	5 96	Barrington passage, tug & screw pass.
Messenger . . . . .	100	" 22..	111·53	13 96	Yarmouth & adjacent Islands, screw pass. & tug.
Evangéline . . . . .	100	May 14..	69·18	10 52	Screw, excursion & tug, Avon river & Bay of Fundy.
Susie . . . . .	40	July 15..	26·83	7 16	Screw, pass., Avon river.
Clayton . . . . .	40	" 15..	42·62	8 44	Screw, pass. and tug, Parrsboro and Bay of Fundy.
Yuba . . . . .	25	Aug. 1..	12·04	5 96	Screw, pass. and freight, Barrington Passage.
Messenger . . . . .	100	" 22..	111·53	13 96	Screw, excursion and Tug, Yarmouth.
Star . . . . .	15	July 1..	6·07	5 48	" pass. & tug, Wallace River.
St. Michael . . . . .	15	Aug. 26..	39·20	8 12	" " L'pool & shore pts.
Maggie . . . . .	37	" 27..	19·26	6 52	" " Lunenburg and South Shore.
Carrie . . . . .	40	" 27..	14·83	6 20	Screw, pass., Chester & Mahone Bay.
Mascott . . . . .	25	" 27..	35·40	7 80	Halifax Harbour.
Collector . . . . .	40	" 30..	52·02	9 16	" "
Lady Glover . . . . .	25	Sept. 16..	137·51	19 08	" "
Lunenburg . . . . .	175	" 26..	205·55	29 28	Screw, pass., & freight, Halifax & coast
Bridgewater . . . . .	225	Oct. 28..	207·78	24 64	" " "
Wilfred C . . . . .	60	" 30..	99·26	12 92	" pass., Halifax & coast.
Goliah . . . . .	17	Nov. 14..	146·83	19 76	" freight, Halifax & coast.
Westport . . . . .	125	" 19..	80·09	11 40	Twin screw & freight, Yarmouth & Coast.
Halifax . . . . .	250	Dec. 6..	338·42	35 04	Screw, pass. & tug, Hal'x & Dartmouth
		1904.			
Newfoundland . . . . .		Feb. 23..	918 75	78 52	Screw, pass. & freight, Halifax & coast.
J. L. Nelson . . . . .	20	M'ch 18..	37·84	8 04	" pass. & tug, Halifax & coastwise
Harbinger . . . . .	39	April 13..	108·56	13 72	Excursion & tug, Yarmouth & adjacent Island.
Louisburg . . . . .		" 16..	1815·60	150 28	Screw, pass. & freight, Can. & foreign.
Coban . . . . .	37	" 18..	1063·30	93 04	" " "
City of Ghent . . . . .	60	" 23..	198·64	23 92	" " Halifax & coast
Flash . . . . .	15	" 25..	7·79	5 64	Halifax Harbour.
Halifax . . . . .	500	" 27..	1814·88	158 00	Screw, pass. & tug, Halifax & coast.
Percy Cann . . . . .	140	" 28..	86·64	11 40	Yarmouth & coast.
La Tour . . . . .	60	" 29..	154·43		" "
Gertrude M . . . . .	35	" 29..	47·58		" "
Harlaw . . . . .	60	Feb. 25..	451·36	44 08	Screw, pass. & freight, Hal'x & coast.
Bonivesta . . . . .	50	May 5..	1306·33		Canadian & foreign, sc., pass. & fr'ght.
Richard . . . . .		" 8..	465·60		Screw, freight, Halifax & coast.
F. W. Robling . . . . .	35	" 9..	161·97		" pass. & tug, Halifax & coast.
Trusty . . . . .	100	" 11..	57·60		" pass., Bridgewater & shore ports
Mikado . . . . .	17	" 12..	43·94		tug & pass., Halifax Harbour.
Arcadia . . . . .	37	" 18..	61·64		" freight, Pictou & coast.



STEAM Vessels Inspected, &c.—Nova Scotia Division—*Concluded.*

HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
May Queen.....	25	May 18..	35 92	.....	Pictou Harbour & river.
Marion.....	37	" 19..	10 30	.....	" "
Merrimac.....	22	" 20..	85 80	.....	Screw, ferry, Strait of Canso.
D. H. Thomas.....	18	" 21..	211 91	.....	" pass. & freight, Halifax & coast
Weymouth.....	100	" 22..	153 93	.....	" " N. Sydney & c.
Pawnee.....	250	" 22..	106 80	.....	" " Can. & foreign.
Peerless.....	300	" 22..	94 27	.....	" " Sydney & N. S.
Cape Breton.....		" 23..	1761 19	.....	" " Can. & foreign.
Cacouna.....		" 23..	1450 78	.....	" " "
Blue Hill.....	140	" 25..	195 83	.....	" " Baddeck & Gr. L.
John L. Cann.....	125	" 26..	165 55	.....	" " Mulgrave & coast
Fred. L. M. Paint.....	36	" 26..	88 18	.....	" ferry, Strait of Canso.
Nelson.....	70	" 26..	64 34	.....	" " Sydney & N. Sydney.
Dartmouth.....	435	June 5..	311 23	.....	" pas. & frgt., Hal'x & Dartmouth
Evangeline.....	150	" 8..	69 18	.....	" excursion & freight, Avon river.
Tourist.....	30	" 10..	4 04	.....	" pass, Yarmouth Harb.
Island Gem.....	40	" 10..	15 06	.....	" " "
Markland.....	50	" 19..	21 92	.....	" freight, St. Marys Bay.
Petrel.....	20	" 23..	6 36	.....	" " Halifax Harb.
I. B. Hamblin.....	100	" 30..	31 71	.....	" excursion, "
Pastime.....	175	" 29..	67 71	.....	Excursion, Halifax Harb.
Acadia.....	100	" 30..	74 21	.....	Screw, pass. & freight, Sydney & N. Sydney.

STEAM Vessels Inspected in Canada but Registered Elsewhere, for the Year ended  
June 30, 1903.

		1903.			
Dahome.....	70	Aug. 8..	2,469 74	205 60	Screw, pass. & freight, Can. & foreign
Pro Patria.....	60	" 13..	759 01	68 72	" " "
Chebucto.....	400	" 13..	578 48	54 24	Twin screw ferry, Halifax & Dartm'th
Ocamo.....	75	" 20..	1,826 54	154 16	Screw pass. & freight, Can. & foreign.
Beta.....	75	Sept. 11..	1,086 67	94 96	" " "
Oruro.....	150	" 17..	1,919 07	161 52	" " "
		1904.			
Glencoe.....	100	Jan. 7..	767 09	69 36	" " " "
Amelia.....	200	April 8..	356 54	36 56	" pass. & freight, Halifax & Coast
Silvia.....	115	" 21..	1,707 70	144 64	" " Can. & foreign.
Prince George.....	600	" 29..	2,040 14	171 20	" " " "
Elaine.....	300	May 21..	272 28	29 76	" " " "
Bruce.....	300	" 23..	1,154 69	100 40	" " " "
Prince Arthur.....	600	June 12..	2,041 44	171 28	" " " "
Olivette.....	450	" 13..	1,678 19	142 24	" " " "
Rosalind.....	150	" 13..	2,567 70	213 44	" " " "

S. R. HILL,  
*Inspector of Hulls and Equipment, Halifax, N.S.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the year ended June 30, 1903.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Waring.....		July 3.	28.74	7 32	Screw, tug, St. John River.
Borrioboola Gha .....		" 8.	95.77	12 68	Paddle " Restigouche River.
Atlas.....		" 8.	15.79	6 28	Screw " coasting.
Nellie H.....		" 8.	7.52	5 64	" fish boat, Dalhousie.
Henrietta.....		" 8.	19.12	6 52	" tug " coasting.
Victor.....		" 9.	45.51	8 68	" " Restigouche River.
Squirrel.....		" 9.	13.11	6 04	" " " "
Florence.....		" 9.	19.33	6 52	" yacht, coasting.
St. Lawrence.....		" 10.	50.82	9 08	" tug " "
Nyanza.....	122	" 10.	83.21	11 64	" passenger, Bathurst Harbour.
Loyalist.....		June 17.	17.57	6 44	Paddle, tug, Miramichi River.
Lord Roberts.....		July 28.	55.98	9 48	Screw " coasting.
Gracie Belle.....			10.52	5 88	" yacht, St. John River.
Dirigo.....	40	Aug. 4.	70.13	10 60	" freight and pass., St. John R.
Viking.....	150	" 4.	127.70	18 24	" pass., St. Croix River.
Bessie Ardella.....		" 4.	17.42	6 36	" fish tug, St. Andrews.
Marguerite.....	40	" 5.	19.66	6 60	" pass. " "
Scout.....		" 13.	9.26	5 72	" tug, coasting.
Dream.....		" 21.	44.51	8 60	" yacht, St. John River.
Carrie Knight.....		Sept. 2.	5.88	5 48	" tug " "
Neptune .. ..	40	" 2.	71.15	10 68	" " and pass., St. John R.
Calluna.....		July 20.	22.26	6 76	" " Richibucto.
Powerful.....		" 20.	29.34	7 32	Paddle " " "
Comet.....			20.85	6 68	" " " "
Alice.....		July 21.	15.77	6 28	Screw " Buctouche.
Amanda Green.....		" 11.	19.63	6 60	" " St. John River.
Jubilee.....		June 25.	16.52	11 24	" fish boat " "
Wenola.....		Sept. 23.	25.10	7 00	" tug, coasting.
Beryl Essie.....		" 23.	23.83	6 92	" " " "
Delta.....			19.93	6 60	" " " "
Aberdeen.....	393	Oct. 7.	243.86	27 52	Stern wheel, pass., St. John River.
Aurora.....	200	" 2.	364.24	37 12	Screw, pass., St. John, Grand Manan.
Vacuna.....		" 14.	9.52	5 80	" tug, freight, Vanceboro.
Springhill. { B.of Minas	100	Sept. 22.	189.05	23 12	" " St. John, coasting.
{ B.of Fundy	60				
Latona.....		May 27.	22.68	6 84	" " " "
Kingsville.....		Nov. 3.	36.59	7 96	" " St. John River.
Western Extension.....	440	Sept. 12.	424.89	42 00	Paddle, ferry " "
		1904.			
Leader.....		Feb. 20.	29.32	7 32	Screw, tug, St. John River.
Hercules.....		Mar. 2.	87.11	11 96	" " " "
E. Ross.....	40	" 12.	29.63	7 40	" ferry " "
Maggie M.....		" 18.	66.78	10 28	" tug " "
G. K. King.....		" 20.	45.48	8 60	" " " "
Serena E.....		" 20.	24.94	7 00	" " Apple River, N.S.
Springfield.....	254	" 21.	232.73	26 64	Stern wheel, pass., St. John River.
Admiral.....		" 24.	158.20	17 64	Paddle, tug, St. John River.
Hero.....		" 24.	127.63	15 24	" " " "
Fred Glasier.....		" 24.	10.39	5 80	Screw " " "
Winnie.....		" 24.	12.46	5 96	" " " "
Nereid.....		" 24.	30.03	7 40	" " " "
Fannie.....		" 24.	33.44	7 64	" " " "
Princess.....	350	" 27.	541.79	51 36	" pass., N.S. and P.E.I.
Northumberland.....	350	" 27.	1,255.46	108 40	Twin screw, pass., N.S. and P.E.I.
Hampstead.....	150	April 1.	234.52	26 80	Screw, pass., St. John River.
Captain.....		" 1.	68.43	10 44	" tug " "
David Western.....	450	" 1.	756.15	69 20	Paddle, pass. " "
Majestic.....	400	" 1.	274.63	30 00	Screw " " "
Champion.....		" 1.	190.14	20 20	Paddle, tug " "
May Queen.....	370	" 2.	539.40	51 12	" pass. " "



STEAM Vessels Inspected, &c.—New Brunswick and P. E. Island Division—*Concluded.*

BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1904.		\$ cts.	
Maggie Miller.....	150	April 4..	104·66	16 40	Paddle, ferry Kennebecasis River.
Clifton.....	200	" 4..	138·21	19 04	Stern wheel, pass., St. John river.
Quiddy.....		" 4..	30·39	7 48	Paddle, tug, St. John river.
Bismark.....	40	" 4..	49·04	8 92	" pass., " "
Helen Glasier.....		" 6..	12·00	5 96	Screw, tug, " "
Victoria.....	700	" 6..	1001·93	88 16	Paddle, pass., " "
W. H. Murray..		" 6..	72·55	10 84	Screw, tug, " "
Sea King.....		" 14..	128·63	15 32	" " " "
Martello.....		" 14..	33·65	7 72	" " " "
Wee Laddie.....		" 14..	16·60	6 36	" " " "
Crystal Stream.....	493	" 15..	482·05	46 56	Paddle, pass., " "
Joseph.....		" 18..	53·78	9 32	Screw, tug, " "
Ld. Kitchener { B.of F. { M. W.	40 176	" 22..	161·24	20 88	" pass., coasting.
Clymeric.....		" 21..	10·39	5 80	" yacht, St. John river
Hope.....		" 22..	305·77	29 48	" tug, " "
G. D. Hunter.....		" 25..	67·97	10 44	" " " "
Clayton.....		" 29..	42·62		" " " "
Montague.....	75	May 4..	129·55		Paddle, ferry, Georgetown.
Electra.....	40	" 4..	106·96		Screw, pass., Charlottetown.
T. A. Stewart.....		" 4..	35·94		Twin-screw, tug " "
Elliot.....		" 5..	367·50		Screw, freight, foreign, Charlottetown.
Fred M. Batt.....	30	" 5..	59·60		" tug, " "
Wm. Aitken.....	25	" 5..	74·87		" pass., " "
Scout.....		" 5..	9·26		" tug, coasting.
J. H. Hackett.....		" 5..	117·07		" " " "
Nelson.....		" 6..	32·80		" " Charlottetown,
Elfin.....	70	" 6..	122·42		Paddle, ferry " "
W. F. McRae.....		" 6..	45·73		" " " "
Peri.....		" 8..	11·77		Screw, tug, St. John river.
Hudson.....		" 29..	33·59		" " " "
Beaver.....	20	" 29..	84·73		" pass., " "
James Holly.....		" 16..	31·21		" tug, " "
Tangent.....		June 5..	35·74		Twin-screw, tug, " "
Neptune.....	40	" 19..	71·15		Screw, tug and pass., St. John river.
Lillie.....	65	" 2..	71·64		" " " "
Ada.....		" 23..	3·66		" Yacht, " "
Annie Currier.....		" 23..	10·56		" tug, " "
Latona.....		" 23..	22·68		" " " "
Fanchon.....	40	" 23..	110·61		Paddle, pass., " "
Carrie Knight.....		" 23..	5·88		Screw, tug, Fredericton.
Ernest.....		" 23..	12·58		" " St. John river.
Eva Johnson.....		" 23..	15·77		" " " "
Randolph.....		" 24..	8·71		Twin-screw, " "
Zuleika.....		" 26..	15·87		Screw, Yacht, " "
Frederick A.....		" 26..	31·11		" tug, " "
Brunswick { B.of Minas { B.of Fundy	300 40	May 23.	184·27		" pass., " "
			11,635·13	1,205 32	



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but registered elsewhere, for the year ended  
June 30, 1903.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Penobscot.....	600	July 14.	1414·02	121 12	Paddle, pass., St. John to Boston.
Campobello.....	100	Aug. 4.	39·81	8 12	Screw, ferry, Lubec.
Lubec .....	125	" 5.	50·94	9 08	" pass., Calais.
Eastport .....	146	" 5.	64·29	10 12	" ferry, Lubec.
Henry F. Eaton....	300	" 6.	240·04	27 20	" pass., Calais.
St. Croix.....	500	Dec. 15.	1993·58	167 52	" " St. John to Boston.
		1904.			
Prince Rupert. . . .	850	May 29.	1158·44	100 64	Paddle, pass., St. John to Digby.
State of Maine. . . .	750	June 11.	1409·99	120 80	" " " to Boston.
Penobscot.....	800	" 12.	1414·02	121 12	" " " "
Total.....			7785·13	685 72	

STEAM Vessels not Inspected for the Year ended June 30, 1903.

Name of Vessel.	Gross Tonnage.	Reg- istered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Flushing .....	177·65	120·80	Laid up, screw. passenger.
St. Kilda .....	55 64	35·06	Inspected in July 1903, tug.
Alexandra.....	200 72	136 49	" " " passenger.
Mascott.....	70·59	47·56	" " " tug.
St. Andrew.....	76·64	52·11	" " " "
Miramichi.....	75 18	51·12	" " " passenger.
St. George.....	277·78	175·01	" " " "
Wenonah .....	9·02	6·13	" " " yacht.
Mary Odell.....	28 92	19 67	" " " passenger.
Edith.....	21 55	14·65	" " " tug.
Arthur .....	4·99	3·40	" " " yacht.
Sarscelle.....	21·86	14·93	" " " tug.
Wm. M.....	29·11	19·80	" " " "
St. Nicholas.....	62 20	42·30	" " " passenger.
Sybella H.....	70 68	47·78	" " " ferry.
Bridgetown..	14 66	9·97	" " " tug.
Laura.....	13 55	8·15	" " " "
Eva .....	18 01	12·25	" " " "
Rustler.....	101 54	63·97	" " " passenger.
Lady Dufferin.....	47 48	28 83	" " " ferry.
Bessie.....	5 18	3·52	" " " tug.
Irene..	10 29	7·02	" " " "
Zulu.....	17 60	10 25	" " " "
St. Isidore.....	141 75	89·30	" " " "
Grey Loggie .....	99 20	67·46	Out of district
Mildred.....	40 11	27·24	Repairing boiler
Storm King.....	107 87	73·55	Laid up
	1,799·68	1,188·32	



STEAM Vessels Inspected for the year ended June 30, 1903.  
NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
" Alexandra "	397	June 16..	200·72	24 08	Screw, pass., Miramichi River.
J. K. Parker.	200	July 23..	230·85	10 00	Barge in tow, St. John River.
Dirigo	40	Aug. 2..	70·13	10 60	Screw, pass. and tug.
Viking	150	" 4..	127·70	18 24	" " Passamaquoddy Bay.
Marguerite.	40	" 4..	19·66	6 60	" " "
Vivian C.	125	" 6..	58·00	10 00	Barge in tow, St. John River.
Neptune.	40	Sept. 2..	71·15	10 68	Screw, pass. and tug, "
Aberdeen.	393	Oct. 7..	243·86	27 52	Stern wheel, pass., "
Aurora	200	" 2..	364·24	37 12	Screw, pass., St. John and coasting.
Springhill	100	Sept. 22..	189·08	23 12	" " " "
Western Extension.	440	" 12..	424·89	41 92	Paddle, ferry, St. John.
		1904.			
No. 3.	300	Jan. 1..	145·00	10 00	Scow in tow, pass., St. John.
E. Ross.	40	Mar. 12..	29·63	7 40	Ferry, screw, St. John River.
Springfield.	254	" 21..	232·73	26 64	Stern wheel, pass., "
Hampstead.	150	" 28..	234·52	26 80	Screw, pass., "
Majestic	400	April 1..	279·63	30 00	" " "
Clifton.	200	" 4..	138·21	19 04	Stern wheel, pass., "
Maggie Miller.	150	" 4..	104·66	16 40	Paddle, ferry, Millidgeville.
David Weston.	450	" 1..	765·15	69 20	" pass., St. John River.
Northumberland.	350	Mar. 27..	1255·46	108 40	Twin screw, pass., Northumberl'd Sts.
Princess.	350	" 27..	541·79	51 36	Screw, pass., "
Crystal Stream	493	April 15..	482·05	46 56	Paddle " St. John River.
May Queen.	420	" 2..	539·40	51 12	" " "
Victoria	885	" 6..	1001·93	88 16	" " "
Electra.	40	May 4..	106·96	...	Screw " Northumberland Straits.
Wm. Aitken.	25	" 5	74·87	...	" " "
Fred M. Batt.	30	" 5..	59·90	...	" " "
Elfin.	70	" 6..	122·42	...	Paddle, ferry Charlottetown.
Montague	75	" 4..	129·55	...	" " Georgetown.
Lord Kitchener.	176	" 14..	161·24	...	Screw, pass. and tug, St. John River.
Elliot	Freight...	" 5..	367·50	...	" freight, coasting and foreign.
Prince Rupert.	850	" 29..	1158·44	100 64	Paddle, pass., St. John and Digby.
Beaver	20	" 29..	84·73	...	Screw, pass., coasting.
Lillie	65	June 2..	71·64	...	" " St. John River.
Neptune.	40	" 19..	71·15	...	" " "
Fanchon.	40	May 27..	110·61	...	Paddle " "
Serena E.	40	Mar. 20..	24·94	...	Screw " "
Brunswick.	350	May 23..	184·27	...	" " Minas Basin.

I. J. OLIVE,  
Hull Inspector, &c.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended  
June 30, 1903.

## NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
"Penobscott" .....	600	July 14..	1414 02	121 12	Paddle, pass., Boston and St. John.
Lubec .....	125	Aug. 5..	50 94	9 08	Screw " Passamaquoddy Bay.
Campobello .....	100	" 4..	39 81	8 12	" " "
Eastport.....	146	" 5..	64 29	10 12	" " "
Henry F. Eaton ..	300	" 5..	240 04	27 20	" " "
St. Croix.....	500	Dec. 15..	1993 58	159 52	" " Boston and St. John.
		1904.			
Penobscot .....	600	June 12 .	1414 02	121 12	Paddle, pass., Boston and St. John.
State of Maine.....	750	" 11..	1409 99	120 80	" " "

I. J. OLIVE,  
*Hull Inspector, &c.*



STEAM Vessels Inspected for the Year ended June 30, 1903.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1903.		\$ cts.	
Delta .....		July 7..	14 90	6 20	Fishing tug, Fraser river.
Wellington.....		" 7..	16 30	6 28	" " " "
Winnifred .....		" 7..	12 96	6 04	" " " "
Albert Lea .....		" 7..	18 67	6 52	" " " "
Burt .....		" 7..	50 41	9 00	" " " "
Britannia .....	300	" 8..	325 94	34 08	Freight and pass., coast B. C.
International.....	300	" 10..	525 55	50 08	" " Kootenay lake.
Kokanee.....	200	" 11..	347 50	35 84	" " " "
Moyie .....	250	" 11..	834 81	74 80	" " " "
Nelson.....	125	" 11..	496 01	47 68	" " " "
Proctor.....		" 11..	43 12	8 44	Tug " "
Ymir.....		" 12..	69 74	10 60	" " "
Hercules.....	50	" 12..	64 68	10 20	Freight and pass., " "
Surprise .....		" 12..	14 80	6 20	Tug " "
Haylis.....		" 12..	43 81	8 52	" " "
Flirt .....		" 12..	3 58	5 32	Yacht " "
Valhalla.....	30	" 12..	153 23	20 24	Freight and pass., " "
Kaslo .....	500	" 13..	764 77	69 20	" " " "
Alberta.....	200	" 13..	508 15	48 64	" " " "
Argenta .....	40	" 13..	206 32	24 48	" " " "
Sandon.....	50	" 15..	96 22	12 68	" " Slocan lake.
Slocan.....	300	" 15..	578 03	54 24	" " " "
Illicillewaet.....	20	" 16..	97 92	12 84	" " Columbia river.
Lytton.....	25	" 16..	451 66	44 16	" " " "
Minto.....	250	" 16..	828 91	74 32	" " " "
Kootenay .....	300	" 16..	117 09	97 36	" " " "
Archer .....	40	" 17..	15 32	6 20	" " " "
Lardeau.....	17	" 17..	9 60	5 80	" " " "
Rossland .....	300	" 18..	883 55	78 72	" " " "
Columbia .....		" 18..	49 84	9 00	Tug " "
Hyak.....	20	" 21..	39 04	8 12	Freight & pass., Upper Columbia riv.
Pert .....		" 21..	6 44	5 48	" " " "
Selkirk .....		" 21..	58 49	9 64	Yacht " "
Victoria.....	30	" 23..	106 60	16 56	Freight and pass., Trout lake.
Idler .....		" 23..	3 88	5 32	Cruising " "
Denver.....		" 25..	8 51	5 72	" Shuswap lake.
Aberdeen.....	250	" 27..	554 04	52 32	Freight and pass., Okanagan lake.
Mermaid.....	40	Aug. 16..	128 55	18 32	" " coast B. C.
Ruth .....	12	" 12..	70 65	10 68	" " " "
Superior.....	25	" 7..	44 18	8 52	" " " "
Hollybank .....	7	" 15..	3 33	5 24	Pass., Alberni canal.
Flyer .....		" 19..	47 64	8 84	Tug, coast B. C.
Courser.....	30	" 20..	160 79	20 88	Frt. and pass., Harrison river.
Joan .....	500	" 8..	821 21	73 68	" " coast B. C.
Danube.....	300	" 16..	886 89	78 96	" " " B. C. & foreign ports
Cascade .....		Sept. 16..	118 76	14 52	Freight, coast B. C.
Mist.....		" 10..	28 68	7 32	Yacht " "
Queen City.....	100	" 8..	391 21	39 28	Freight and pass., coast B. C.
Ethel Ross .....		Oct. 8..	82 05	11 56	" Shuswap lake.
Thompson .....		" 9..	149 80	20 00	" " "
Rifle .....		" 9..	36 62	7 96	" North Thompson river.
Willapa .....	100	Sept. 19..	373 09	37 84	" and pass., coast B. C.
Tees .....	125	Oct. 3..	679 15	62 32	" " " "
Albion .....	30	Jan. 27..	88 11	5 00	Freight and pass., coast B. C. Special inspection for passengers.
Charmer.....	500	Nov. 3..	144 41	91 52	Freight and pass., coast B. C.
Maime .....	12	Aug. 24..	89 60	12 20	" " " "
Princess Louise.....	98	Nov. 6..	931 76	82 56	" " " "
Maude.....		Dec. 5..	174 99	19 00	" coast B. C.
Mystery .....	20	" 10..	64 80	10 20	" and pass., coast B. C.
Delta.....		" 9..	25 20	7 00	" coast B. C.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.,—British Columbia Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where Employed.
		1903.		\$ cts.	
Venture. ....	12	May 26..	654·52	8 00	Freight, coast B. C. Special after stranding and extensive repairs.
Mabel. ....		Dec. 13..	5·28	5 40	Tug, coast B. C.
Water Lily. ....		Dec. 18..	73·81	10 92	Water boat, Esquimalt Harbour.
		1904.			
Thistle. ....	50	Jan. 2..	222·36	25 76	Freight & pass., coast, B.C.
Czar. ....	17	" 8..	152·18	20 16	" "
Sadie. ....	12	" 9..	49·30	8 92	" "
Albion. ....	30	" 20..	88·11	12 04	" "
Otter. ....	70	" 21..	365·97	37 28	" "
Hope. ....	12	" 15..	78·59	11 32	" "
Barbara Boscowitz ...	133	Feb. 10..	337·92	35 04	" "
Edith. ....		" 11..	41·87	8 36	Fishing tug, Rivers Inlet.
J. L. Card. ....		" 11..	141·06	16 28	Freight coast, B.C.
Wyefield. ....		" 14..	2,334·59	266 80	" B.C. and foreign ports.
Alert. ....		" 17..	43·81	8 52	Tug, coast, B.C.
Pilot. ....	22	" 16..	279·05	30 32	Freight and pass., coast, B.C.
Princess May. ....	350	" 26..	1,393·76	119 52	" " B.C. & foreign por.
Florence. ....		" 21..	30·41	7 40	Fishing tug, Skeena River.
Nell. ....	25	Mar. 11..	207·97	24 64	Freight and pass., coast, B.C.
Iroquois. ....	65	" 16..	195·49	23 60	" " "
Daisy. ....		" 21..	60·10	9 80	Tug, coast, B.C.
Selkirk. ....	35	" 23..	141·63	19 36	Freight and pass., coast, B.C.
Oscar. ....		" 24..	95·42	12 60	" coast, B.C.
Lorne. ....	20	April 6..	287·96	31 04	" and pass., coast, B.C.
Mount Royal. ....	130	" 11..	471·03	45 68	" " Skeena River.
Arab. ....	51	" 16..	4,216·00	345 28	" " B.C. & foreign por.
Victorian. ....	450	" 23..	1,503·64	138 32	" " coast, B.C.
Yosemite. ....	400	May 7..	1,525·03		" " "
Amur. ....	228	" 11..	907·17		" " B.C. & foreign por.
Athens. ....		" 20..	23·21		Halibut fishing coast, B.C.
Venture. ....		" 26..	654·52		Freight, B.C. & foreign ports.
Willie. ....	27	June 3..	82·60		" and pass., Alberni canal.
Kootenay. ....	36	" 10..	7·74		Pass., Victoria Harbour.
City of Naniamo. ....	500	" 8..	761·37		Freight and pass., coast, B.C.
Trader. ....	20	" 9..	167·18		" " "
Alarm. ....		" 12..	33·91		Tug, coast, B.C.
Don. ....		" 25..	4·19		" Victoria Harbour.
Edna Grace. ....		" 26..	42·00		" coast, B.C.
Total. ....			31,442·51	3,912 60	

J. A. THOMSON,  
Steamboat Inspector, Victoria, B.C.



STEAM Vessels Inspected in Canada but Registered elsewhere for the year ended June 30, 1903.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where Employed.
			\$ cts.		
North Star .....	120	July 21..	379 88	38 40	Fre't & pass., Upper Columbia River.
Majestic.....	200	" 9..	659 00	60 72	" B.C. & foreign ports.
Cottage City.....	273	Aug. 7..	1,885 11	158 80	" " "
Queen.....	336	" 19..	2,727 80	226 24	" " "
Rosalie.....	127	Oct. 1..	318 51	33 52	" " "
City of Puebla.....	500	Sept. 2..	2,623 88	217 92	" " "
City of Topeka. ....	150	Oct. 23..	1,057 29	92 56	" " "
Garland.....	50	Nov. 4..	166 61	21 28	" " "
Senator.....	430	Jan. 19..	2,409 60	200 72	" " "
Dolphin.....	235	Mar. 24..	824 26	73 92	" " "
Valentia.....	286	May 5..	1,598 49	135 84	" " "
Humboldt....	311	" 13..	1,075 00	94 00	" " "
City of Seattle.....	456	" 13..	1,411 05	120 88	" " "
Spokane.....	297	June 23..	2,036 20	170 88	" " "
Umatilla....	424	" 24..	3,069 76	253 60	" " "
Total.....			22,242 44	\$1,899 28	

STEAM Vessels not Inspected for the year ended June 30, 1903.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Alert .....	3 11	2 12	Laid up, screw passenger.
Arrow.....	4 50	3 06	" " tug, stern wheel.
R. P. Rithet .....	816 69	686 16	" freight and passengers.
Strathcona.....	596 28	375 66	" machinery out of repair.
Revelstroke. ....	308 55	178 59	" to be inspected later.
	1729 13	1245 59	

J. A. THOMSON,  
Steamboat Inspector, Victoria. B.C.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the year ended June 30, 1903.

BRITISH COLUMBIA AND YUKON DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and Where Employed.
		1903.		\$ cts.	
Columbian.....	150	July 2..	716	65 28	Stern wheel, P. & F., Yukon river.
Wilbur Crimmin.....	70	" 2..	168	21 44	" " "
White Horse.....	150	" 3..	987	86 96	" " "
Clifford Sifton.....	150	" 3..	291	31 28	" " "
Mary F. Graff.....		" 7..	864	77 12	" freight "
Marjorie.....	25	" 8..	20	6 60	" ferry "
Prospector.....	120	" 9..	263	29 04	" P. & F. "
Tyrrell.....	150	" 9..	678	62 24	" " "
Bonanza King.....	60	" 1..	466	45 28	" " "
Seikirk.....	150	" 13..	777	70 16	" " "
Yukoner.....	150	" 15..	781	70 48	" " "
Casca.....	150	" 16..	590	55 20	" " "
Thistle.....	140	" 27..	225	26 00	" " "
Lorelie.....		June 7..	32	7 56	" yacht "
Victorian.....	150	July 26..	716	65 28	" P. & F. "
Zealandian.....	70	" 28..	180	22 40	" " "
Lafrance.....	140	" 26..	201	24 08	" " "
Quick.....	25	Aug. 6..	67	5 36	" " "
Olive May.....		" 27..	85	11 80	" freight "
Scotia.....	100	" 22..	214	25 12	" P. & F., Atlin Lake.
Gleaner.....	150	" 23..	242	27 36	" " Bennet Lake.
Bailey.....	100	" 27..	193	23 44	" " Yukon river.
Joseph Closset.....	50	" 28..	147	19 76	" " "
Golden Crown No. 1.....		" 28..	114	17 12	Dredge, Stewart river.
Mystery.....	20	Sept. 20..	65	10 20	Screw, P. & tug, B. C. coast.
Fingall.....		" 22..	91	12 28	" freight "
Clansman.....		" 22..	72	10 76	" " "
Staffa.....		" 22..	57	9 08	" " "
*Emma Nott.....		Oct. 16..	73	27 68	Steam wheel, freight, Yukon river.
Monarch.....		" 1..	284	30 72	" " "
Lightning.....	100	" 1..	557	52 56	" P. & F. "
Favourite.....	100	" 25..	257	28 56	" " Fraser river.
Leonora.....		" 15..	33	7 64	Screw, tug, B. C. coast.
Kildonan.....		Nov. 4..	51	9 08	" " "
Belle.....		" 6..	67	10 56	" " "
Stampede.....		" 9..	12	5 96	" " "
Etta White.....	15	" 11..	97	12 76	" P. & T. "
Hong Kong.....		" 18..	36	7 88	" " "
Lottie.....		" 25..	29	7 32	" " "
Cassair.....	300	" 20..	597	55 76	" P. & F. "
Blonde.....		" 11..	33	7 64	" tug "
Vancouver.....		May 7..	50	5 00	" " "
Comet.....		June 23..	85	5 00	" " "
Sea Lion.....		Dec. 16..	6	5 48	" " "
Psyche.....		Nov. 1..	3	5 24	" yacht "
Eva.....		" 11..	35	7 80	" tug "
		1904.			
Muriel.....	14	Jan. 9..	44	8 52	Screw, P. & T., B. C. coast.
Transfer.....	120	" 19..	264	29 12	Stern wheel, P. & F., Fraser river.
*Donney.....		" 5..	15	12 40	Screw, tug, B. C. coast.
Ruth.....		" 24..	71	10 68	" " "
Comox.....	60	" 27..	101	16 08	" P. & F. "
Active.....	20	" 2..	172	21 76	" P. & T. "
Defiance.....	39	Feb. 9..	90	12 20	" P. & F. "
*Thistle.....		" 18..	2	10 32	" tug "
Capilona.....	25	" 17..	231	26 48	" P. & F. "
Albert Lea.....		" 24..	19	6 52	" tug "
Senator.....		Oct. 28..	28	7 24	" " "

\* Dues and fees for 1902 and 1903.



STEAM Vessels Inspected, &c.—British Columbia and Yukon Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1904.		\$ cts.	
Superior.....	25	Mar. 13..	44	8 52	Screw, P. & T., B.C. coast.
Robert Dunsmuir.....	40	Feb. 17..	232	26 56	Twin screw, P. & F., B. C. coast.
Orillia.....		Mar. 7..	12	5 96	Screw, tug, B. C. coast.
Coquitlam.....	75	Feb. 7..	256	28 48	" P. & F. "
Tyee.....		Mar. 1..	32	7 56	" tug "
*May Queen.....		" 3..	14	12 24	" " "
Hamlin.....	100	" 1..	515	49 20	Stern wheel, P. & F., Skeena river.
Esperenza.....		Feb. 20..	37	7 48	Screw, tug, Fraser river.
Stranger.....		" 20..	21	6 68	" " B. C. coast.
Fire Fly.....		March 9..	46	8 68	Stern wheel, tug, Fraser river.
North Star.....		" 9..	8	5 64	Screw, tug "
Ramona.....	75	Feb. 12..	251	28 08	Stern wheel, passengers and freight.
Fearless.....		" 20..	53	9 24	Screw, tug, British Columbia coast.
Magnet.....		" 19..	24	6 92	" " "
		1903.			
Vigilant.....		Aug. 31..	29	7 32	" " "
		1904.			
Reliance.....		March 1..	36	7 88	" " "
Vulcan.....		" 1..	77	11 16	" " "
Cleeve.....		" 1..	36	7 88	" " "
Tepic.....	13	" 16..	71	10 68	" pass. and tug "
Native.....	10	" 16..	52	9 16	" " " "
Nagasaki.....		" 17..	15	6 20	" tug, British Columbia coast.
Alice.....		" 18..	35	7 80	" " " "
Cascade.....	12	" 18..	119	17 52	" pass. and freight "
Nora.....		" 23..	20	6 60	" tug, Skeena river.
Champion.....		" 24..	100	103 00	" freight, B. C. coast.
Eagle.....	12	" 25..	35	7 80	" pass. and tug, B. C. coast.
Lois.....	10	" 26..	25	7 00	" " " "
Surrey.....	50	April 27..	163	29 04	Paddle, ferry, Fraser river.
Edna, W.....		" 4..	15	6 20	Screw, tug, Rivers inlet.
Water Lily.....		" 1..	4		" yacht, B. C. coast.
Britannia.....	300	" 1..	326	34 08	" pass. and freight, B. C. coast.
Dauntless.....		" 6..	128	15 24	" tug, British Columbia coast.
Stella.....		" 15..	16	6 28	" " " "
Comet.....		" 17..	85		" " " "
Evangeline.....		" 20..	14	24 48	" yacht, Alert bay.
Swan.....		" 22..	36	7 88	" tug, British Columbia coast.
Westminster.....		" 24..	18	6 44	" " Skeena river.
Olive.....		" 24..	35	7 80	" " " "
Glen Rosa.....		" 24..	18	6 44	" " " "
Lottie, N.....		" 24..	34	7 72	" " " "
*Maime.....		" 24..	9	11 44	" " " "
Chieftian.....		" 24..	65	10 20	" " " "
Hazelton.....	150	" 24..	379	38 24	Stern wheel, pass. and fr., Skeena riv.
Bermuda.....	25	May 1..	72		Screw, pass. and tug, B. C. coast.
Chehalis.....	15	" 1..	54		" " " "
Unican.....	40	" 1..	131		" pass. and freight, B. C. coast.
St. Clair.....	25	" 5..	68		" " tug "
Phoenix.....	30	" 6..	87		" " " "
Delta.....		" 1..	15		" tug, British Columbia coast.
Starling.....		" 1..	8		" " " "
Terra Nova.....		" 1..	47		" " " "
Wellington.....		" 1..	16		" " Fraser river.
North Vancouver.....	200	April 18..	104		" ferry, Burrard inlet.
Minto.....	20	May 9..	36		Stern wheel, P. and F., Harrison riv.
Defender.....	30	" 9..	160		" " " "
Courser.....	30	" 10..	161		" " " lake.

\*Dues and fees for year 1902 and 1903.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—British Columbia and Yukon Division—*Concluded.*

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1904.		\$ cts.	
Dreadnought.....		May 11..	33		Screw, tug, British Columbia coast.
Autolycus.....		" 1..	25		" " "
Comet.....	12	April 2..	85		" pass. and tug, B. C. coast.
Surprise.....		May 12..	75		" tug, British Columbia coast.
Beaver.....	150	" 1..	545		Stern wheel, pass. and fr., Fraser riv.
Hong Kong.....		" 1..	36		Screw, tug, British Columbia coast.
City of Tipella.....	10	" 1..	19		" pass. and tug "
Mou Ping.....		" 14..	20		" yacht, British Columbia coast.
Fern.....		April 16..	24		" tug " "
Clara Young.....		May 1..	31		" " " "
Erie.....		" 1..	27		" " " "
Brunette.....		" 20..	37		" " " "
Iris.....		" 20..	38		" " " "
Dorothy.....		" 20..	20		" " " "
Raven.....		" 1..	24		" " " "
Constance.....		" 21..	50		" " " "
Stampede.....	12	" 22..	12		" Pass. and tug, B.C. Coast.
Surprise.....		" 27..	20		" " " "
Vancouver.....	12	" 2..	50		" " " "
Enterprise.....		June 1..	12		" " " "
Evolvo.....		" 1..	13		" Yacht " "
Defiance.....	39	" 9..	90		" Pass. and tug " "
Uno.....		" 1..	12		" Tug. " "
Escort No. 2.....		" 1..	192		" " " "
Dolphin.....		" 1..	20		" " " "
Burt.....		" 1..	50		" " " "
Hubert.....		" 1..	6		" Yacht. " "
Greenwood.....		" 1..	23		" Tug. " "
Troubador.....		" 1..	18		" " " "
Halifax.....		" 1..	28		" " " "
Fraser.....		" 1..	36		" Freight. "
Total.....			18,808	\$1,935 37	

STEAM Vessels Inspected in Canada but registered elsewhere for the year ended  
June 30, 1903.

## BOILERS MACHINERY AND HULL.

Leah.....	135	July 9..	478	46 24	Stern wheel, P. and F., Yukon River.
Sarah.....	250	" 14..	1211	104 88	" " "
Susie.....	250	" 19..	1211	104 88	" " "
Leon.....	150	" 23..	692	63 36	" " "
Robert Kerr.....	60	" 26..	719	65 52	" " "
Louise.....	150	" 27..	718	65 44	" " "
Will. H. Ison.....	250	" 28..	983	86 64	" " "
T. C. Powers.....	125	Aug. 3..	820	73 60	" " "
Rock Island.....	160	" 4..	534	50 72	" " "
F. K. Gustin.....	50	" 8..	445	43 60	" " "
Lavelle Young.....	50	" 8..	506	48 48	" " "
Mainlander.....	200	Jan. 27..	505	48 40	Screw " Puget Sound.
North Pacific.....	200	June 1..	489	47 12	Paddle " "
Total.....			9,311	\$848 88	

F. M. RICHARDSON, R.N.R.,  
Steamboat Inspector, Vancouver, B.C.



3-4 EDWARD VII. A. 1904

Steam Vessels not inspected for the year ended June 30, 1903.

BRITISH COLUMBIA AND YUKON DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks.
			Why not inspected and Class of Vessel.
Rothestay.....	553	348	Stern Wheel, Pass. and Freight. Laid up.
Olive.....	51	26	" " "
Majorie.....	20	12	" Ferry "
Welcome.....	32	20	" Tug "
Kilbourne.....	87	55	" " "
Saga.....	252	177	Screw, Freight "
On Time.....	11	4	" Tug, No application.
New Era .....	56	37	" Freight "
Milkmaid.....	7	5	" Tug "
Winetta.....	24	16	" " "
Gipsy.....	10	7	" " "
	1,103	707	

F. M. RICHARDSON, R.N.R.,  
Steamboat Inspector, Vancouver, B.C.

STATEMENT of Tow Barges inspected, and of Certificates of Inspection issued to Tow Barges in the British Columbia and Yukon Division, for the Year ended June 30, 1903.

Name of Vessel.	No. of Passengers.	Port of Inspection.	Date Certificate Expires.	Inspection Fees.
			1902.	\$
Louise.....	200	Dawson.....	August 3...	10
Scow .....	150	" .....	" 3...	10
Total .....				20

F. M. RICHARDSON,  
Steamboat Inspector.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the year ended June 30, 1903.

## BRITISH COLUMBIA DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Britannia.....	300	July 8..	325·94	34 08	Screw, passengers B.C. waters.
Superior.....	25	Aug. 7..	44·18	8 52	" " "
Joan.....	500	" 8..	821·21	73 68	Twin screw " "
Ruth.....	12	" 12..	70 65	10 68	Screw " "
Mermaid.....	40	" 16..	128·55	18 32	Twin screw " "
Hollybank.....	7	" 15..	3·33	5 24	Screw " "
Lapwing.....	None.	" 21..	150·73	17 08	" freight.
Iroquois.....	65	April 1..	195·49	ss special	" passenger "
Courser.....	30	Aug. 20..	160·79	20 88	Stern wheel, passenger, Fraser river.
Welcome.....	16	June 3..	32·43	7 56	" " "
Danube.....	300	Aug. 16..	886·89	78 96	Screw, passenger, B.C. waters.
Queen City.....	100	Sept. 8..	391·21	39 08	" " "
Willapa.....	100	" 19..	373·09	37 84	" " "
Mystery.....	20	" 20..	64 80	10 20	" " "
Tees.....	125	Oct. 3..	679 15	62 32	" " "
Albion.....	30	Jan. 27..	88 11	ss special	" " "
Favourite.....	100	Oct. 25..	256·58	25 56	Stern wheel, passenger, Fraser river.
Charmer.....	500	Nov. 3..	1044·41	91 52	Screw, passenger, B.C. waters.
Maime.....	12	Aug. 24..	89·60	12 20	" " "
Princess Louise.....	98	Nov. 6..	931·76	82 56	Paddle " "
Ella White.....	15	" 11..	97·35	12 76	Screw " "
Cassiar.....	300	" 20..	597·18	55 76	" " "
Maude.....	None.	Dec. 5..	174·99	19 00	" freight "
Vancouver.....	12	May 7..	49·96	ss special	" passenger "
Mystery.....	20	Dec. 10..	64·80	10 20	" " "
		1904.			
Thistle.....	50	Jan. 2..	222·36	25 76	" " "
Czar.....	17	" 8..	152·18	20 16	" " "
Sadie.....	12	" 9..	49·30	8 92	" " "
Hope.....	12	" 15..	78·49	11 32	" " "
Transfer.....	120	" 19..	264·16	29 12	Stern wheel, passenger, Fraser river.
Comox.....	140	" 20..	101 17	16 08	Screw, passenger, B.C. waters.
Otter.....	70	" 21..	365·97	37 28	" " "
Albion.....	30	" 22..	88 11	12 04	" " "
Active.....	20	Feb. 2..	171·74	21 76	" " "
Coquiltam.....	75	" 7..	256·33	28 48	" " "
Muriel.....	14	" 13..	44 13	8 52	" " "
Wyfield.....	None.	" 14..	3234·59	266 80	" freight, B.C. and foreign ports.
Pilot.....	22	" 16..	259·05	30 32	" passenger, B.C. waters.
Robert Dunsmuir.....	40	" 17..	231·75	26 56	Twin screw " "
Defiance.....	39	" 9..	89·88	12 20	" " "
Barbara Boscowitz.....	133	" 10..	337·92	35 04	" " "
Princess May.....	350	" 26..	1393·76	119 52	" " "
Nell.....	25	M'ch. 11..	207·97	24 64	" " "
Iroquois.....	65	" 16..	195·49	23 60	" " "
Tepic.....	15	" 16..	70·87	10 68	" " "
Superior.....	25	" 17..	44·18	8 52	" " "
Cascade.....	12	" 18..	118·76	17 52	" " "
Ruth.....	12	Jan. 24..	70·65	10 68	" " "
Native.....	10	M'ch. 19..	51·51	9 16	" " "
Selkirk.....	35	" 23..	141·63	19 36	" " "
Lois.....	10	April 1..	25·15	5 00	" " "
Eagle.....	12	" 2..	34·74	7 80	" " "
Lorne.....	20	" 6..	287·96	31 04	" " "
Capilano.....	25	Feb. 17..	231·14	26 48	" " "
Mount Royal.....	130	April 11..	471·00	45 68	Stern wheel, passenger, Skeena river.
Arab.....	51	" 16..	4216·00	345 28	Screw, B.C. and foreign ports.
Survey.....	50	M'ch. 21..	263·26	29 04	Paddle, passengers, Fraser river.
Hamlin.....	100	April 2..	514·91	49 20	Stern wheel, " "
Comet.....	12	" 21..	85·56	11 80	Screw, passengers, B.C. waters.



STEAM Vessels Inspected, &c.—British Columbia Division—*Concluded.*

HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
			1904.	\$ cts.	
Victorian.....	450	April 23..	1503·64	128 32	Screw, passenger, B.C. waters.
Bermuda.....	25	May 1..	72·03		" " "
Vancouver.....	12	" 2..	49·96		" " "
Yosemite.....	400	May 7 .	1,525·03		Paddle, " "
Phoenix .....	30	" 8..	87·18		Screw, " "
Unican. ....	40	" 8..	130·92		" " "
Amur ..	228	" 11..	907·17		" " "
Chehalis..	15	" 14..	53·75		" " "
North Vancouver .....	200	April 25..	103·53		" " Burrard inlet.
Venture.....	None.	May 26..	654·52		Twin screw, frgt., B.C.& foreign ports.
Beaver..	150	April 12..	545·44		Stern wheel, passenger, Fraser river.
Stampede.....	12	June 5..	11·97		Screw, passenger, B.C. waters.
Trader.....	20	" 9..	167·18		" " "
City of Nanaimo .....	500	" 8..	761 37		Twin screw, passenger, B.C. waters.
Kootenay.....	36	" 10..	7·74		Screw, passenger, Victoria Harbour.
Minto.....	20	May 22..	36·19		Stern wheel, passenger, Fraser river.
Courser .....	30	" 11..	160·79		" " "
Defender.....	30	" 9..	216·10		" " "
Ramona..	75	Feb. 12..	259·79		" " "
Ping Pong.....	30	June 22..	7·00	10 00	Barge, passenger, Victoria Harbour.

STEAM Vessels Inspected in Canada but registered elsewhere for the year ended June 30, 1903.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.			
Majestic..	200	July 9..	659·00	60 72	Screw, B.C. & foreign ports.
Queen ..	336	Aug. 19..	2,725·80	226 24	" " "
Cottage City.....	273	" 7..	1,883·11	158 80	" " "
City of Pueblo.....	511	Sept. 2..	2,623·88	217 92	" " "
Rosalie.....	127	Oct. 1..	318·51	33 52	" " "
City of Topeka.....	150	" 23..	1,057·29	92 56	" " "
Garland.....	50	Nov. 4..	166·61	21 28	" " "
		1904.			
Mainlander..	200	Jan. 26..	505·19	48 40	" " "
Senator.....	430	" 19..	2,409·60	200 72	" " "
Dolphin .....	235	Mar. 24..	824·26	73 92	Twin screw, B.C. & foreign ports.
Valencia.....	286	May 5..	1,598·49	135 84	Screw, B.C. & foreign ports.
Humboldt .....	321	" 12..	1,075·00	94 00	" " "
City of Seattle.....	456	" 13..	1,411·05	120 88	" " "
North Pacific. ....	200	June 6..	488 73	47 12	Paddle " "
Spokane.....	297	" 23..	2,036 20	172 88	Screw " "

R. COLLISTER,  
*Hull Inspector.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1903.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and Where employed.
		1903.		\$ cts.	
Mikado.....		July 3..	24.92	7 00	Screw, tug, Lakes of the Woods.
W. C. Van Horne. ....		" 4..	59.91	9 80	" " "
Widgeon. ....		" 9..	2.21	5 16	" " "
Inez.....	20	" 9..	59.10	9 72	" " Thunder bay.
Laura Grace.....	140	" 10..	85.56	11 88	" " & tug "
Circe.....		" 10..	2.83	5 24	" yacht "
Georgina.....		" 12..	43.78	8 52	" tug "
Brothers.....		" 12..	17.50	6 44	" fish tug "
Orcadia.....		" 15..	23.16	6 84	" " Port Caldwell.
Rosey May.....		" 16..	3.60	5 32	" " Rossport.
Viking.....		" 16..	15.25	6 20	" " "
Zena.....		" 16..	3.69	5 32	" " "
Maud C.....		" 17..	5.16	5 40	" " "
Swan.....		" 17..	7.76	5 64	" " "
Bertha.....		" 17..	10.59	5 88	" " "
Maple Leaf.....		" 17..	5.21	5 40	" " "
Inza.....		" 19..	8.79	5 72	" tug, Thunder bay.
Herbert.....		" 19..	21.13	6 68	" " "
Mary Hatch.....		Aug. 11..	121.18	14 78	" " Lake of the Woods,
Alexandra.....	250	" 16..	163.37	21 12	" Pass., Red river.
Ogema.....		" 30..	29.84	7 40	" Fish tug Lake Winnipeg.
Roddy.....		Sept. 1..	14.10	6 12	" " "
Iland.....		" 1..	30.49	7 40	" " "
Fern.....		Not issued	12.61	...	" " "
Lulu M. Ray.....		Sept. 7..	32.64	7 64	" tug, Thunder bay.
Isabel.....		" 15..	60.90	9 88	" " Winnipegosis.
Iona.....		" 15..	39.15	8 12	" " "
Manitou.....		" 15..	107.97	13 64	" " "
Lady Ellen.....		" 15..	18.56	6 52	" " "
Lottie S.....		" 15..	48.03	8 84	" " "
Ospray.....		" 29..	21.02	6 68	" " Lake Manitoba.
Pioneer.....		" 30..	16.44	6 28	" frt. and pass., Pelican Lake.
James Adams.....		" 23..	50.97	9 08	" tug, Thunder bay.
Petrel.....		" 30..	167.68	21 44	" frt., Lake Manitoba,
Chieftain.....		Oct. 7..	36.26	7 88	" tug Lake of the Woods.
Minnetonka.....		" 7..	68.24	10 44	" " "
Princess.....		" 25..	7.83	5 64	" fish tug, "
		1904.			
Argyle.....	150	April 7..	77.70	11 24	" ferry, Rat Portage & Keewatin
Josie.....		" 24..	12.42	...	" tug, Lake of the Woods.
Keenora.....	500	" 25..	486.34	46 88	" pass., "
Maple Leaf.....	40	" 25..	81.84	11 56	" " "
Agwinda.....	125	" 25..	307.41	23 56	Strn. pad. pass. Rainy river.
Georgina.....		" 27..	43.78	8 52	Screw fish tug, Port Arthur.
A. W. Crawford.....		" 28..	51.40	9 08	" " Thunder bay.
Superior.....	150	" 28..	88.54	...	" pass. & frt "
Brothers.....		" 28..	17.50	6 44	" fish tug, Lake Superior.
Herbert.....		" 28..	21.13	...	" tug, Thunder bay.
St. Joe.....		" 29..	117.64	...	" frt, North Shore, L. Superior.
Shamrock.....		May 2..	79.84	...	" tug, Lake of the Woods.
Keewatin.....		" 2..	41.25	...	" " "
D. L. Mather.....		" 2..	103.32	...	" " "
Daisy Moore.....		" 2..	38.21	...	" fish tug, "
Daisy.....		" 4..	26.33	...	" " Lake Winnipeg.
Chieftain.....		" 4..	60.85	...	" " "
Fisherman.....		" 4..	44.22	...	" " "
Rocket.....		" 5..	55.61	...	" " "
Premier.....	75	" 5..	413.99	...	" pass. & frt.. "
Angler.....		" 5..	16.16	...	" fish tug "
City of Selkirk.....	75	" 5..	457.82	...	" pass. & frt "



STEAM Vessels Inspected &c.—Keewatin, Manitoba and North west Territories Division— *Concluded.*

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.		Gross Tons.	Tonnage Dues and Inspection Fees Paid	Class of Vessel and Where employed.
		1904.			\$ cts.	
Lady of the Lake.....	20	May	6..	201·43	.....	Screw, pass. & frt., Lake Winnipeg.
Frank Burton.....	.....	"	6..	93·74	.....	" tug " "
Viking.....	50	"	6..	17·60	.....	" pass. and frt. " "
Highlander.....	.....	"	6..	59·24	.....	" frt. and tug, " "
Balmoral.....	.....	"	6..	36·93	.....	" fish " "
Idell.....	.....	"	7..	53·92	.....	" " " "
Princess.....	20	"	8..	405·44	.....	" pass. and frt., " "
Alexandra.....	250	"	8..	163·57	.....	Str. pde. pass., Red river.
Gertie H.....	.....	"	8..	90·95	.....	Screw freight " "
Clipper.....	40	"	11..	52·95	.....	" pass., Lake of the Woods.
Rambler.....	25	"	11..	25·83	.....	" " " "
Gem.....	21	"	11..	11·08	.....	" fish tug " "
Primrose.....	.....	June	18..	8·40	.....	" tug, Slave and Athabaska riv.
Graham.....	40	"	23..	260·39	.....	Str. pdl. pass., " "
Alpha.....	40	"	30..	7·50	.....	Screw tug, " "
Total.....	.....	.....	.....	5579·27	\$428 24	

STEAM Vessels Inspected in Canada but Registered Elsewhere &c.—Keewatin, Manitoba and North west Territories Division.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.		Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and Where employed.
		1903.				
Iroquois.....	500	July	22..	1169·89	.....	Scr. pas. & frt., Port Arthur & Duluth.
Mable Bradshaw.....	.....	"	23..	331·00	.....	" " " "

GEO. P. PHILLIPS,  
*Steamboat Inspector.*



## SESSIONAL PAPER No. 21

STEAM Vessels not Inspected for the Year ended June 30, 1903.

## KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks.
			Why not Inspected and Class of Vessel.
Pastime.....	4.00	2.82	Screw. Not in commission.
Carry L.....	14.56	7.99	Paddle. To be inspected.
Undine.....	9.46	6.44	Screw. " "
James Mayhew.....	16.94	11.64	" " " "
Kate Marks.....	54.15	34.09	" " " "
Geo. Ward.....	2.39	1.69	" " " "
Minnehaha.....	9.20	5.90	" " " "
Minota.....	34.95	23.77	" Not in commission.
Ida.....	19.37	13.37	" " " "
Minnewahan.....	4.61	3.71	" " " "
Dolly.....	2.57	2.00	" To be inspected.
John Glenn.....	14.07	6.00	" " " "
Klondike.....	8.05	4.00	" " " "
Annie Mc.....	13.42	11.10	" Not in commission.
Beaver.....	34.51	22.21	" To be inspected.
Gale.....	2.62	0.97	" " " "
Circe.....	2.83	1.93	" " " "
Siskewett.....	41.52	12.90	" " " "
Rambler.....	6.14	2.94	" " " "
Mohican.....	34.20	24.08	" " " "
Moose.....	38.30	13.86	" Not in commission.
City of Alberton.....	67.54	45.86	" To be inspected.
Grace B.....	21.18	13.79	" " " "
Silver Spray.....	1.56	.....	" " " "
Princess.....	6.56	5.55	" " " "
Queen.....	31.65	18.71	" " " "
Ethel Banning.....	37.54	25.53	" " " "
Little Bobbs.....	13.19	8.97	" " " "
Miles.....	63.04	42.89	" " " "
Empress.....	129.28	73.43	" " " "
Villeneuve.....	27.58	18.64	" " " "
Cruiser.....	26.92	15.56	" " " "
Gordon M.....	3.01	2.01	" " " "
Sport.....	16.26	11.64	" " " "
Sultana.....	3.35	2.74	" " " "
Energy.....	116.45	70.00	" " " "
Dolphin.....	12.63	8.58	" " " "
Wm. White.....	17.81	12.36	" " " "
Wm. Cross.....	21.66	16.31	" " " "
Galatea.....	46.10	30.26	" " " "
Minneola.....	9.20	5.90	" " " "
Irine.....	9.71	6.20	" " " "
Nord.....	20.23	13.76	" " " "
Widgeon.....	7.95	1.09	" Not in commission.
Edith.....	42.95	29.94	" " " "
Heather Bell.....	21.18	14.40	" To be inspected.
Total.....	1,142.39	707.51	

GEO. P. PHILLIPS,  
Steamboat Inspector.



STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended June 30, 1903, their Class and Horse power, whether of Wood or Iron ; their Gross and Registered Tonnage ; where built ; and where and how employed.

WESTERN ONTARIO DIVISION.

Name of Vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Winona .....	24·00	Screw .....	Wood .....	231	149	PortStanley, O	Lake Erie, passenger.
Delila .....	0·67	" .....	" .....	4	3	Algonac, Mic.	Detroit River, yacht.
Winslow .....	69·46	" .....	" .....	353	193	Clevel'nd, Ohio	Lakes, tug.
Meteor .....	10·80	" .....	" .....	47	32	P. Robinson, O.	Welland canal, tug.
Nellie H. ....	2·13	" .....	" .....	25	17	Detroit, Mich.	Detroit River "
Inenew .....	12·93	" .....	Composite	109	46	Toronto, Ont.	Hudson Bay, freight.
D. W. Crow ...	5·00	" .....	Wood .....	27	17	Chatham "	Chatham & vicinity, tug.
R. H. Dobson .	13·50	" .....	" .....	44	30	Goderich "	Lake Huron, fishing tug.
Onward .....	3·33	" .....	" .....	22	15	Kincardi'e "	" "
Sir Wilfrid ..	17·06	.....	Composite	399	.....	Toronto "	Rivers & Harbour, dredge.
Louisa .....	5·60	Screw .....	Wood .....	13	9	Wallaceb'rg, O	Wallaceburg & vic., yacht.
E. G. Ashley ..	3·33	" .....	" .....	10	7	Toledo, Ohio..	" tug.
Walter H. Stone	2·70	" .....	" .....	35	17	Sandusky " ..	Lake Erie, fishing tug.
Iroquois .....	106·30	" .....	Steel.....	2,359	1,452	Toronto, Ont.	Prescott&D'l'th,pas.&fr'ght
Manitou .....	42·67	" .....	Wood .....	470	297	Goderich "	L. Huron & Geo. bay "
Norseman .....	99·46	" .....	" .....	620	400	S. Catharin's, O	Duluth & Prescott, freight.
Simla .....	106·30	" .....	" .....	1,490	973	Garden Isl., O	Lakes & Rivers "
Boscobel .....	97·08	" .....	" .....	617	420	Chicago, Illin.	Lakes, tug.
Argyle .....	10·80	" .....	" .....	41	28	Buffalo, N. Y.	"
B. W. Aldrich .	17·06	" .....	" .....	41	28	Milwaukee, W	"
Total. ....	650·18			6,957	4,133		

JOHN DODDS,  
*Steamboat Inspector, Toronto.*

WEST ONTARIO DIVISION.

Eagle .....	83	Screw .....	Wood .....	10	7	Pt Severn, Ont	Georgian Bay, tug.
Ladyof theLake	6·00	" .....	" .....	47	25	Thornbury "	" " freight.
Kestrel .....	2·66	" .....	" .....	7	5	Toronto "	Muskoka Lakes, yacht.
Puritan .....	4·22	" .....	" .....	6	4	Holland, Mich.	" " "
Minnette .....	1·83	" .....	" .....	4	3	Owen Sound, O	Lake of Bays "
Dolly Gray .....	83	" .....	" .....	5	3	Dorset, Ont...	" "
Osso .....	2·66	" .....	" .....	6	4	Kingston, Ont.	Muskoka Lakes "
Algoma .....	2·40	" .....	" .....	5	3	" "	" "
Lady of t. Lake	5·00	" .....	" .....	7	4	" "	" "
Bella Vista .....	5·00	" .....	" .....	5	3	" "	" "
Sky Pilot .....	2·66	" .....	" .....	5	3	" "	" "
Anchora .....	5·00	" .....	" .....	6	3	" "	" "
Glad Tldings...	1·63	" .....	" .....	10	7	Orillia "	Sparrow Lake, passenger.
Osprey .....	16·66	" .....	" .....	42	28	Goderich "	Lake Huron, fishing tug.
W. J. Smith ...	10·66	" .....	" .....	26	17	Rich. L'ding, O	Sault Ste. Marie river, tug
Gypsy .....	2·66	" .....	" .....	11	8	Toronto, Ont..	Killarney&S'lt S. Marie,pas
Midland Queen	124·13	" .....	" .....	1,993	1,349	Dundee, S'land	Duluth & Prescott, f't.&pas.
Harold, B. Phil's	13·06	" .....	" .....	66	31	Lorraine, Wis.	
Captain Jim ...	22·43	" .....	" .....	58		U. S. ....	S'lt.S. Marie & vicinity, tug
Caroline .....	1·20	" .....	" .....	12	39	Goderich, Ont.	Lake Superior, fishing tug.
W. H. Seymour.	36·53	" .....	" .....	85	8	Moon river "	Georgian bay, tug.
Mills .....	2·20	" .....	" .....	11	42	Erie, Pa. U S A	North Channel "
Lake .....	8·16	" .....	" .....	13	7	Owen Sound, O	Manitou Lake, fishing tug.
Clipper .....	16·66	" .....	" .....	46	5	Kingston, Ont.	Lake Simcoe, dredge tug.
					29	Midland "	Georgian bay, tug.
Total .....	295·07			2,486	1,637		

E. W. McKEAN.



## SESSIONAL PAPER No. 21

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended June 30, 1903; their Class and Horse power; whether of Wood or Iron; their Gross and Registered Tonnage; where built; and where and how employed.

## EAST ONTARIO.

Name of Vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Baptiste.....	83	Paddle....	Wood....	7.51	4.74	Lindsay, Ont..	Kawartha lakes, tug.
McClintock..	2.70	Alligator Paddle..	"	20.72	13.06	Simcoe, Ont..	" " "
Cora.....	1.20	Sc'w, pass.	"	22.61	15.76	Port Perry, O.	Cos. Vict. & Peterboro, pass.
Rockaway. ....	83	Pad., punt	"	6.80	4.62	Lindsay, Ont.	Lindsay waters, tug.
Cobocank.....	1.20	"	"	9.11	6.24	Cobocank, Ont.	Balsam lake, tug.
Stanley.....	83	"	"	6.80	4.62	Lindsay, Ont.	Lindsay waters, tug.
Dredge Alfred .	2.70	No propelling P..	"	89.19	60.65	Kirkfield, Ont.	Lindsay waters.
Hiawatha.....	1.20	Paddle....	"	22.25	17.85	Lindsay, Ont.	" " tug.
Maida-Vale..	1.63	Screw....	"	18.74	12.75	Hastings, Ont.	Stoney lake, yacht.
Mermaid.....	.67	"	"	10.95	7.45	Millbrook, Ont.	Otonabee river, yacht.
M. & W.....	1.20	"	"	8.48	5.77	Kingston, Ont.	St. Lawrence river, yacht.
David S. Walker	29.00	"	"	55.55	22.02	Farrans Pt., O.	" " tug.
Ajax.....	4.03	"	"	32.97	23.42	Bobcaygeon, O.	Kawartha lakes, tug.
Total..	48.02	.....	.....	311.68	198.95		

THOS. P. THOMPSON,  
*Steamboat Inspector.*

## MONTREAL DIVISION.

Grain Elevator No. 18.	16.0	Screw....	Steel....	214	132	Montreal....	Montreal harbour, Grain Elevating.
Dorothy. ....	5.2	"	Wood....	19	10	Cache Bay....	Lake Nipissing, passenger.
Seaborn.....	2.6	"	"	30	20	Seabury, U.S.	River, yacht.
Scotsman.....	17.3	"	"	265	114	Ottawa.....	Ottawa river, freight & pass
Total.....	41.1			528	276		

WM. LAURIE,  
LOUIS ARPIN.

## QUEBEC DIVISION.

Virginia.....	12.0	Paddle....	Iron..	1,701.13	1,052.04	Wilmington..	Pass., Mont. & Chicoutimi.
Restigouche (ex Rathlin).	11.2	Screw....	"	945.00	463.00	Glasgow, 1899.	" Dalhousie & Gaspé..
Dream.....	2.4	"	Wood....	27.44	18.66	Gr. Piles, 1903	" Grs. Piles & Latuque
Frankie.....	3.3	"	"	16.99	7.88	Quebec, "	Tug, Quebec Harbour.
Alma.....	5.3	"	"	42.75	29.07	Sorel	" Excursion Boat.
Missisquois....	6.5	"	"	159.98	107.24	Noyan	" Pass., Mont. & Burlington.
George Winfield Smith.	3.3	"	Composite	23.80	16.18	Levis	" Tug, Lake Metapedia.
Corine.....	4.8	"	Wood....	23.24	9.26	St. Joseph	" Quebec Harbour.
Shearly.....	10.6	"	"	37.17	25.28	Bic	" Matane & the coast.
Total..	268.2			2,977.50	1,728.61		

PHILIPPE DUCLOS,  
*Hull Inspector.*

JOS. SAMSON,  
*Engine and Boiler Inspector.*



STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended June 30, 1903, their Class and Horse power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and where and how employed.

NOVA SCOTIA DIVISION.

name of vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How employed.
I. C. U. ....	53	Screw ....	Wood ....	3.58	3.58	Not known...	Screw, pass., Annapo. Bas.
Clayton. ....	4.26	" .....	" .....	42.62	23.84	Parrsboro, N.S.	" " Pars. & Bay of F.
Cygnets. ....	1.20	" .....	" .....	11.23	7.64	Yarmouth, "	" fishing, coasting.
Loretta. ....	1.63	" .....	" .....	12.02	8.18	Tus.-Wed., "	" tug, Tusket river.
Albion. ....	1.20	" .....	" .....	9.14	6.22	Moser's riv. "	" tug, Mosers river.
Parrsboro. ....		" .....	" .....			Parrsboro, "	" pas. Wind. & Parrsb.
Victor. ....	6.00	" .....	" .....	26.86	18.27	Yarmouth, "	" freight coasting.
Ampitrite. ....	24.00	" .....	" .....	149.45	83.60	Mahan bay, "	" "
F. W. Roebling	42.66	" .....	" .....	161.97	77.77	Wilfad, U.S.A	" tug and pas. coast'g.
Bruce. ....	3.30	" .....	" .....	55.70	37.88	Halifax, N.S.	" light., Halif. Harb.
Rona. ....	16.60	" .....	" .....	70.05	42.47	Liverpl., "	" tug coasting.
Total. ....	101.38			542.62	309.45		

HALIFAX, N.S.

J. P. ESDAILE,  
*Steamboat Inspector.*

NEW BRUNSWICK AND PRINCE EDWARD DIVISION

Hudson. ....	7.26	Screw ....	Wood. ....	33.59	22.84	St. John, N.B	Pleas. yacht, St. John riv.
Crystal Stream.	43.00	Paddle....	" .....	482.05	363.69	Br. Fr., U.S.A	Passenger, St. John river.
Lord Kitchener	47.00	Screw ....	" .....	161.24	109.64	St. John, N.B	Pas. & tug, St. John riv. & est.
Total. ....	97.26			676.88	436.17		

NEW BRUNSWICK AND P.E.I.

J. P. ESDAILE,  
*Steamboat Inspector.*

BRITISH COLUMBIA DIVISION.

Rifle. ....	2.	Stern whl.	Wood. ....	36.62	23.08	Kamloops ....	North Thompson riv. freig.
M. S. Dollar. ....	276.2	Screw . .	Steel. ....	4216.	2674.	N.-Cst.-on-Ty.	Pac. Oc. freig. and passen.
Victorian. ....	233.	" .....	Wood. ....	1503.64	809.17	Portland, Ore.	Coast, B.C., "
Athens. ....	1.	" .....	" .....	23.21	8.02	Victoria, B.C.	" Halibut fish'g.
Don. ....	1.9	" .....	" .....	4.19	2.85	" "	Victoria harbour tug.
Edna Grace. ....	9.	" .....	" .....	42.	22.	" "	Coast, B.C., towing.
Total . . .	523.1			5944.42	3539.12		

VICTORIA, B.C.

J. A. THOMSON,  
*Steamboat Inspector.*



## SESSIONAL PAPER No. 21

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended June 30, 1903, their Class and Horse power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and where and how employed.

## VANCOUVER AND YUKON DIVISION.

Name of Vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Reg. Tonnage.	Where Built.	Where and How employed.
Thistle.....	6.6	S. wheel...	Wood ....	225	153	Dawson ....	Yukon River, pass. and frt.
Golden Crown No. 1.....				114	64	White Horse..	Stewart " dredging.
Favorite .....	9	S. wheel...	" .....	257	162	N. Westmins'r	Fraser " pass. and frt.
Cascade.....	16	Screw .....	" .....	119	81	Vancouver....	B. C. Coast " "
Edna W.....	2.6	" .....	" .....	15	10	" .....	Rivers inlet, tug.
Water Lily....	2.9	" .....	" .....	4	3	" .....	Fraser river, yacht.
Raven .....	6.8	" .....	" .....	25	17	Friday Harb..	B. C. Coast, tug.
Evolve.....	7	" .....	" .....	13	9	Vancouver....	" yacht.
Total.....	44.9			772	499		

F. M. RICHARDSON, R.N.R.,  
Steamboat Inspector.

## KEEWATIN, MANITOBA AND NORTH WEST TERRITORIES.

Alexandra.....	4.2	S. paddle.	Wood ....	163.57	37.53	Winnipeg. M.	Passenger, Red river.
Roddly .....	0.53	Screw .....	" .....	14.10	9.59	Selkirk. Man.	Fish tug, Lake Winnipeg.
Firn .....	1.5	" .....	" .....	12.61	6.00	Winnipeg " "	" " " "
Lulu M. Ray..	5.00	" .....	" .....	32.64	25.40	Landing ton.	
James Adams..	9.6	" .....	" .....	50.97	34.60	Duluth, Mich.,	
St. Joe.....	9.6	" .....	" .....	117.64	80.01	U.S.A.....	" " " "
Pioneer.....	3.3	" .....	" .....	16.44	8.44	Port Arthur..	Frt.. N. Show Lake Sup.
St. Charles....	6.0	" .....	" .....	28.79	19.50	Pelecan Lake,	
Caraboo. ....	6.0	" .....	" .....	28.65	19.49	Manitoba. . .	" and pass. Pelecan, L., M.
Eva. ....	8	" .....	Composite	49.28	27.90	Peace river,	
Primrose .....	1.2	" .....	Wood ....	8.40	5.72	N.W.T.....	Private freight, Peace riv.
						Fort Smith, N.	
						W.T. ....	Tug and freight, McKenzie and Slave rivers.
						Athabasca	
						Landing....	Tug and freight, McKenzie and Slave rivers.
						Ft. Chepewgan	Tug and freight, Slave and Athabasca rivers.
Total.....	54.93			523.09	274.18		

GEO. P. PHILLIPS,  
Steamboat Inspector.



STATEMENT of Steam Vessels lost, broken up or laid up, as unfit for service, in the Dominion during the year ending June 30, 1903, and where and how employed.

WEST ONTARIO DIVISION.

Name of Vessel.	Where and how last employed.	Gross Tonnage.	Class of Vessel and reason of Unfitness.
Cambria.....	Lake Ontario, pass.....	937	Paddle, dismantled.
Union.....	Buffalo and Fort Erie, pass.....	207	" "
Luther Westover.....	Georgian bay, tug.....	127	" "
C. H. Merritt.....	Sault river, pass.....	122	Screw, "
Maud S.....	Georgian bay, tug.....	14	" "
Conqueror.....	" " ".....	25	" "
Sea Gull.....	Sault river ".....	41	" "
Florence.....	Muskoka lakes, tug.....	27	" "
Hector.....	Welland canal ".....	43	" "
Walter Scott.....	Georgian bay, Fish'g, tug.....	26	" "
Geo. Swarrn.....	Lake Huron, " ".....	18	" "
Frankie.....	Sydenham river, yacht.....	24	" "
Viola.....	Georgian bay, ".....	68	" "
		1739	

JOHN DODDS,  
E. W. McKEAN,  
*Toronto, Ont.*

EAST ONTARIO DIVISION.

Alberta.....	R. St. Lawrence, freight.....	122·43	Screw, destroyed by fire.
Owen.....	R. St. Lawrence, ".....	102·84	" Wrecked and went to pieces.
Undine.....	Cos. Vict. and Peterboro, tug...	13·81	" Hull used up.
Beaubocage.....	" " ".....	129·00	Paddle, " " "
Carmana....	Bay of Quinte, yacht.....	56·08	Screw, destroyed by fire.
Bannockburn.....	Great Lakes, freight.....	1619 56	" Unheard from ; last heard of on Lake Superior Nov. 21, 1902.
		2043 72	

THOS. P. THOMPSON.

MONTREAL DIVISION.

St. Peter.....	Montreal, Harbour tug.....	43	Screw, dismantled.
Comet.....	Lake Temiskamingue, frt. & pass.	144	" burnt.
		187	

WM. LAURIE.  
LOUIS ARPIN.



QUEBEC DIVISION.



3-4 EDWARD VII. A. 1904

STATEMENT of Steam Vessels lost, broken or laid up, &c.—*Concluded.*  
BRITISH COLUMBIA AND YUKON DIVISION.

Name of Vessel.	Where and how last employed.	Gross Tonnage.	Class of Vessel and reason of Unfitness.
Ina.....	B. C. coast, tug... ..	8	Screw, broken up.
Star.....	" " " " " " " "	14	" " " " " " " "
Eldorado.....	Yukon river, pass. and freight.	466	Stern wheel, dismantled.
	Total.....	488	

Vancouver  
F. M. RICHARDSON, R.N.R.,  
Steamboat Inspector.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

Phantom.....	Lake of the Woods, pass. and fgt	55·68	Screw, burnt.
Kennina.....	" fish tug.....	41·86	" "
Pearl.....	" " " " " "	10·00	" "
Midge..	" " " " " "	11·08	" "
Day Star.....	" " " " " "	12·52	" "
Princess.....	" " " " " "	7·83	" "
Spray.....	" " " " " "	8·99	" "
Cairo.....	Eagle lake " " " "	14·47	" hull condemned.
Athabasca.....	Athabasca river, pass and fgt.	166·73	Stern paddle "
Minnetonka.....	Lake of the Woods, tug.....	88·34	Screw "
Sunbeam..	" " " " " "	2·86	" "
Thistle.....	Rainy river, pass. and freight.	9·00	" machinery taken out.
W. J. Aikins.....	Lake Superior, tug.....	41·82	" hull condemned.
	Total.....	471·18	

GEO. P. PHILLIPS,  
Steamboat Inspector.



## SESSIONAL PAPER No. 21

LIST of Certificates of Competency and Temporary Certificates granted to Engineers of Steamboats, during the year ended June 30, 1903.

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1902.					\$ cts.
3183	July 2..	Frederick Windsor.....	Temporary.	Callender, Ont.....	Callendar.....	2 00
3184	" 2..	Xavier Beaudry.....	"	Pembroke, Ont.....	Pembroke.....	2 00
3185	" 2..	Pierre Marchidon.....	"	Sturgeon Falls, Ont.....	Montreal.....	2 00
3186	" 2..	John Anderson Camber....	"	Georgeville, Que.....	Georgeville....	2 00
3187	" 2..	Charles Livingston.....	"	Sturgeon Falls, Ont.....	Sturgeon Falls	2 00
3188	" 2..	John McCaw.....	"	Dorset, Ont.....	North Bay....	2 00
3189	" 2..	John C. Fitzpatrick.....	4th Class.....	Morrisburg, Ont.....	Montréal.....	5 00
3190	" 2..	Alfred Samson.....	4th "	Village Bienville, Que..	Quebec.....	5 00
3191	" 2..	Joseph Nadeau.....	Temporary.	Lake St. John, Que....	St. Gedeon....	2 00
3192	" 5..	John McGraw.....	"	Brockville, Ont.....	Brockville.....	2 00
3193	" 12..	Wm. R. Rogers.....	"	Webbwood, Ont.....	Salt Ste Marie	2 00
3194	" 12..	Herbert R. Stevens.....	"	Huntsville, Ont.....	Huntsville....	2 00
3195	" 12..	George W. McDonald.....	"	Penetanguishene.....	Penetang'ish'e	2 00
3196	" 12..	Joseph Reynolds.....	"	"	Toronto.....	2 00
3197	" 12..	George Moreau.....	"	Waubauskene, Ont.....	Waubauskene.	2 00
3198	" 12..	Thomas C. Young.....	"	Rat Portage, Ont.....	Rat Portage..	2 00
3199	" 12..	George Woodward.....	"	Melbourne, Que.....	North Hatley	2 00
3200	" 12..	Richard Whiteman.....	"	Vermilion Bay, Ont....	Vermilion B'y.	2 00
3201	" 12..	Roy G. Skene.....	"	Drayden, Ont.....	Gold Rock....	2 00
3202	" 12..	Andrew Leitch.....	1st Class.....	Halifax, N.S.....	Halifax.....	5 00
3203	" 16..	Chas. E. Taylor.....	Temporary.	Correnna, Ont.....	Sarnia.....	2 00
3204	" 16..	Peter Brow.....	"	Lake Megantic, Ont....	Quebec.....	2 00
3305	" 17..	Eldridge Phillips.....	"	Mira Gut, C.B.....	Mira.....	2 00
3206	" 29..	George Willis.....	"	Carleton Place, Ont....	Carleton Place	2 00
3207	Aug. 8..	Joseph Fournier dit Allard	"	Levis, Que.....	Quebec.....	2 00
3208	" 8..	George Edward Hull.....	"	Clarina, Ont.....	Lakefield....	2 00
3209	" 8..	M. L. Crandell.....	"	Port Perry, Ont.....	Kingston.....	2 00
3210	" 8..	James H. Spencer.....	"	Parry Sound, Ont.....	Parry Sound..	2 00
3211	" 8..	Albert E. Stephenson.....	"	"	"	2 00
3212	" 8..	Herbert R. Adam.....	"	Hawkston, Ont.....	Port Cockburn	2 00
3213	" 8..	Joseph Bark.....	"	Cornwall, Ont.....	Kingston.....	2 00
3214	" 8..	Geo. Thomas Leach.....	"	Montreal, Que.....	Montreal.....	2 00
3215	" 8..	Timothy Whitred.....	"	Gore's Landing, Ont....	Hastings.....	2 00
3216	" 7..	George Emond.....	4th Class.....	Montreal, Que.....	Montreal.....	5 00
3217	" 7..	Théodore Breton.....	4th "	Levis, Que.....	"	5 00
3218	" 13..	Aldore Gagnon.....	Temporary.	Rat Portage, Ont....	Rat Portage..	2 00
3219	" 13..	Geo. Rene Cotrel.....	3rd Class.....	Montreal, Que.....	Montreal.....	5 00
3220	" 14..	Lewis Goodchild.....	Temporary.	Amherstburg, Ont.....	Amherstburg..	2 00
3221	" 25..	Gabriel Bellefeuille.....	"	Winnipeg, Man.....	Winnipeg.....	2 00
3222	" 25..	William Powles.....	"	Tyendinago, Ont.....	Kingston.....	2 00
3223	Sept. 10..	Thos. Naas.....	"	Lunenburg, N.S.....	Halifax.....	2 00
3224	" 10..	Walker Langille.....	"	Pictou, N.S.....	Pictou.....	2 00
3225	" 10..	Isaac R. Brigham.....	"	Ottawa, Ont.....	Aylmer.....	2 00
3226	" 12..	Joseph Gagnon.....	"	Ste Anne de Chicoutimi, Q	Ste. Anne de Chicoutimi.	2 00
3227	" 12..	Frank Stanton.....	"	Severn Bridge, Ont....	Sparrow Lake.	2 00
3228	" 13..	Wm. Sharp Wallace.....	"	Orillia, Ont.....	"	2 00
3229	" 23..	Howard Wm. Feoster.....	4th Class.....	Vancouver, B.C.....	Vancouver....	5 00
3230	" 23..	Wm. Bandy.....	4th "	"	"	5 00
3231	" 23..	Christian M. Christian....	3rd "	"	"	+
3232	" 27..	Robert Daniel Webster....	2nd "	Halifax, N.S.....	Halifax.....	5 00
3233	" 29..	Alexander McLeod.....	Temporary.	Pictou, N.S.....	"	2 00
3234	Oct. 4..	John Chas. Hudson.....	"	Barry's Bay, Ont.....	Barry's Bay..	2 00
3235	" 4..	Arthur Thomas Willette....	"	Dawson, Y.T.....	Dawson.....	2 00
3236	" 4..	Joseph Dumulon.....	"	Ville-Marie, Que.....	Ville-Marie....	2 00
3237	Sept. 4..	John Thomas Henley.....	4th Class.....	Dawson, Y.T.....	Dawson, Y.T..	5 00
3238	" 7..	John Scott.....	4th "	Halifax, N.S.....	Halifax, N.S..	5 00
3239	" 7..	Henri Trottier.....	3rd "	Roberval Lac St. John, Q	Quebec, Que..	5 00
3240	Oct. 11..	John Warry.....	4th "	Halifax, N.S.....	Halifax, N.S..	5 00
3241	" 11..	John Underwood Lilly....	4th "	"	"	5 00
3242	" 11..	Edward B. Fraser.....	4th "	Pictou, N.S.....	"	5 00
3243	" 11..	Alexander Anderson.....	3rd "	Halifax, N.S.....	"	5 00
3244	" 14..	Welsford H. Tully.....	3rd "	Dawson, Y.T.....	Dawson, Y.T..	5 00
3245	" 17..	Erk. Duncan McDonald....	4th "	Sydney, N.S.....	Halifax, N.S..	5 00
3246	" 20..	L. R. Boulanger.....	2nd "	Jeune Lorette, Que....	Quebec, Que..	5 00
3247	" 21..	Thos. Wilbert Whitelay....	Temporary.	Sombra, Ont.....	Sombra, Ont..	2 00



3-4 EDWARD VII. A. 1904

LIST of Certificates of Competency granted to Engineers of Steamboats, &c.—*Continued*

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address	Where Examination was passed.	Fee.
	1903.					\$ cts.
3248	Oct. 27	Albert Desrochers	3rd Class	Ste. Croix, Que.	Montreal, Que.	5 00
3249	" 27	Alex. Guildford	4th "	Halifax, N.S.	Halifax, N.S.	5 00
3250	" 30	Selby Alex. Stevenson	4th "	Dartmouth, N.S.	"	5 00
3251	Nov. 3	Levy McMillan	4th "	Sherbrooke, N.S.	"	5 00
3252	" 7	Joseph Lepage	2nd "	Village Bienville, Que.	Quebec, Que.	5 00
3253	" 7	Zéphyrin Desrochers	3rd "	Ste. Croix, Que.	"	5 00
3254	" 7	Alphonse Toutant	3rd "	Champlain, Que.	"	5 00
3255	" 17	Donald McQuarrie Fraser	3rd "	French River, Ont.	French Riv'r, O	5 00
3256	" 17	Albert James Hamilton	4th "	Spanish Station, Ont.	Little Curr't, O	5 00
3257	" 20	Henri Brisson	4th "	Chicoutimi, Que.	Quebec, Que.	5 00
3258	" 20	Scott Wilson Clark	3rd "	Little Current, Ont.	Little Curr't, O	5 00
3259	" 20	Edwin Braniff	4th "	Richard's Landing, Ont.	Sault Ste. Marie, Ont.	5 00
3260	" 20	Jonas Johnson	3rd "	Vancouver, B.C.	Vancouver, BC	5 00
3261	" 20	John Wilson Shephard	4th "	"	"	5 00
3262	" 27	Alexander Rondeau	2nd "	Sorel, Que.	Sorel, Que.	5 00
3263	Dec 3	Wm. Arthur Gamble	4th "	St. Mary's York, Co., N.B.	St. John, N.B.	5 00
3264	Jan 3	Wm. G. Allan	2nd "	Victoria, B.C.	Victoria, B.C.	5 00
3265	" 5	John Leonard	Temporary	St. John, N.B.	St. John, N.B.	2 00
3266	" 5	Wm. H. Way	4th Class	Kingston, Ont.	Kingston, Ont.	5 00
3267	" 5	Geo. Greenshields	3rd "	Nelson, B.C.	Victoria, B.C.	5 00
3268	" 5	August Pendola	1st "	Vancouver, B.C.	Vancouver, BC	"
3269	" 7	George W. Dixon	3rd "	"	"	"
3270	" 7	David Roberts	3rd "	"	"	"
3271	" 7	Archd. John Fisher	4th "	Toronto, Ont.	Toronto, Ont.	5 00
3272	" 7	Andrew Lees Black	4th "	"	"	5 00
3273	" 13	Wm. Turnie Rennie	4th "	Collingwood, Ont.	"	5 00
3274	" 13	Chas. Benj. Patterson	4th "	Picton, Ont.	Kingston, Ont.	5 00
3275	" 13	Chas. L. Lavallée	2nd "	Toronto, Ont.	Toronto, Ont.	"
3276	" 13	Henry M. Sallaway	4th "	Victoria, B.C.	Victoria, B.C.	5 00
3277	" 13	James Ansman	Temporary	Revelstoke, B.C.	"	2 00
3278	" 24	Samuel A. Barker	"	Harrison River, B.C.	Vancouver, BC	2 00
3279	" 26	Adolphe Derouin	2nd Class	Toronto, Ont.	Toronto, Ont.	5 00
3280	" 26	Wm. John Buchanan	4th "	Moonstone, Ont.	"	5 00
3281	" 26	William Harding	4th "	Collingwood, Ont.	"	5 00
3282	" 27	Peter Ryan	2nd "	Hamilton, Ont.	"	5 00
3283	" 27	Archibald Ancom	4th "	"	"	5 00
3284	" 27	Alfred W. Thompkins	4th "	"	"	5 00
3285	" 27	Thos. Joseph Hayden	4th "	Nicolston, Ont.	"	5 00
3286	" 30	Robt. Henry Veech	2nd "	Garden Island, Ont.	Kingston, Ont.	5 00
3287	" 30	Napoléon Lazure	4th "	Ste. Cunégonde, Que.	Montreal, Que.	5 00
3288	" 30	Xavier Séguin	4th "	Rockland, Ont.	"	5 00
3289	" 30	Wm. A. Marshall	4th "	Kingston, Ont.	Kingston, Ont.	5 00
3290	" 30	John Charles Carr	4th "	Port Dalhousie, Ont.	Toronto, Ont.	5 00
3291	" 30	John A. McLachlan	4th "	Parkhill, Ont.	"	5 00
3292	Feb. 7	Frank Krafve	Temporary	Barrington Passage, N.S.	Halifax, N.S.	2 00
3293	" 7	Richard J. Riley	"	Annapolis, N.S.	St. John	2 00
3294	" 7	Clowes Banks	"	St. Mary's, N.B.	"	2 00
3295	" 7	John Kelso	"	Huntsville, Ont.	Toronto	2 00
3296	" 7	William Wright	3rd Class	Port Dalhousie, Ont.	"	5 00
3297	" 7	James M. Fardy	4th "	Charlottetown, P.E.I.	St. John	5 00
3298	" 7	Frank W. Morisey	4th "	St. John, N.B.	"	5 00
3299	" 7	Alexander G. Cameron	4th "	Chatham, N.B.	"	5 00
3300	" 7	John Edmonds	4th "	Charlottetown, P.E.I.	"	5 00
3301	" 7	Robert Patterson	4th "	"	"	5 00
3302	" 7	John Nicoll	4th "	Collingwood, Ont.	Toronto	5 00
3303	" 7	Robert Johnston	4th "	Gore Bay, Ont.	"	5 00
3304	" 7	Hugh Wm. Fletcher	4th "	Owen Sound, Ont.	"	5 00
3305	" 9	Wm. Burgoyne	Temporary	Fenelon Falls, Ont.	Kingston	2 00
3306	" 9	Chas. Edward Dalton	1st Class, U.K.	Farville, N.B.	St. John	"
3307	" 9	Arthur Lee	3rd "	Vancouver, B.C.	Vancouver	5 00
3308	" 9	Orlando W. Roberts	3rd "	Dawson, Y.T.	Dawson	5 00
3309	" 9	Wm. Kirby	4th "	Toronto, Ont.	Toronto	5 00
3310	" 9	Wm. Ewart Gillman	4th "	"	"	5 00
3311	" 9	Wm. James Kennedy	4th "	Garden Island, Ont.	Kingston	5 00

\* Second examination.



## SESSIONAL PAPER No. 21

List of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certifi- cate.	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1903.					\$ cts.
3312	Feb. 9.	Harry Donald McDonald	4th Class	Chatsworth, Ont.	'Toronto'	5 00
3313	" 9.	Alex. James Scobie	4th "	Collingwood, Ont.	"	5 00
3314	" 9.	John Alex. Gunn	4th "	Owen Sound, Ont.	"	5 00
3315	" 9.	Andrew Russell	4th "	Vancouver, B.C.	Vancouver	5 00
3316	" 9.	George L. Lamb	4th "	Penetanguishene, Ont.	Toronto	5 00
3317	" 9.	John Robert Brown	4th "	"	"	5 00
3318	" 9.	Henry Hill	4th "	Collingwood, Ont.	"	5 00
3319	" 17.	William Jacobs	4th "	Nelson, B.C.	Victoria	5 00
3320	" 17.	Walter Henry Harlock	4th "	Victoria, B.C.	"	5 00
3321	" 17.	Archibald McGregor	4th "	"	"	5 00
3322	" 17.	James T. Thurston	4th "	Picton, Ont.	Kingston	5 00
3323	" 17.	James McD. Denny	3rd "	Victoria, B.C.	Victoria	5 00
3324	" 17.	David Pringle Wilson	3rd "	"	"	5 00
3325	Mar. 4.	Walter Bryden	3rd "	Steelton, Ont.	Sa'l't Ste. Marie	5 00
3326	" 4.	James McGray	3rd "	Little River, N.S.	Halifax	5 00
3327	" 4.	George P. Fitzpatrick	3rd "	Aylmer, Que.	Montreal	5 00
3328	" 4.	Eugène Hamelin	3rd "	Montreal, Que.	"	5 00
3329	" 4.	Lloyd Ballard Gore	3rd "	Vancouver, B.C.	Vancouver	5 00
3330	" 4.	William W. Roberts	2nd "	St. John, N.B.	St. John	5 00
3331	" 4.	John Russell Perkins	4th "	Toronto, Ont.	Toronto	5 00
3332	" 4.	William Webb	4th "	Owen Sound, Ont.	"	5 00
3333	" 4.	Martin Jas. Rankin	4th "	Kingston, Ont.	Kingston	5 00
3334	" 4.	James Leonard	4th "	Goderich, Ont.	Toronto	5 00
3335	" 4.	Zaccheus White	4th "	Toronto, Ont.	"	5 00
3336	" 4.	George Brander	4th "	Halifax, N.S.	Halifax	5 00
3337	" 4.	George Langlois	4th "	Montreal, Que.	Montreal	5 00
3338	" 4.	Auguste Lecounte	4th "	Valleyfield, Que.	"	5 00
3339	" 4.	Alphonse Hamelin	2nd "	Montreal, Que.	"	5 00
3340	" 4.	Chas. F. Dobbie	2nd " U.K.	Halifax, N.S.	Halifax	5 00
3341	" 4.	Daniel H. McQuarrie	2nd "	St. John, N.B.	"	5 00
3342	" 4.	Daniel Edwin Read	1st "	Pictou, N.S.	"	5 00
3343	" 11.	Charles John Crawford	4th "	Sault Ste. Marie, Ont.	Sa'l't Ste. Marie	5 00
3344	" 11.	Fred. Perks	4th "	Meaford, Ont.	Toronto	5 00
3345	" 11.	David Myler	4th "	Collingwood, Ont.	"	5 00
3346	" 11.	Archibald C. McInnis	4th "	Meaford, Ont.	"	5 00
3347	" 11.	Andrew Townsley	3rd "	Victoria, B.C.	Victoria	5 00
3348	" 11.	Siméon Boisvert	4th "	Sorel, Que.	Sorel	5 00
3349	" 11.	Théodore Thériault	4th "	Village Lauzon, Que.	Quebec	5 00
3350	" 17.	William Currie	2nd " U.K.	Pictou, N.S.	Halifax	5 00
3351	" 17.	George Herbert Burpee	2nd "	Burton, N.B.	St. John	5 00
3352	" 17.	John Wm. Crowley	2nd "	St. John, N.B.	"	5 00
3353	" 17.	Donald Kingston	2nd " U.K.	Chatham, N.B.	St. John, N.B.	5 00
3354	" 18.	Ronald F. Link	Temporary	Gravenhurst, Ont.	P. Carling, O.	2 00
3355	" 18.	Wm. P. Cowie	"	Fairville, N.B.	St. John, N.B.	2 00
3356	April 6.	Alexander McLeod	"	Pictou, N.S.	Halifax, N.S.	2 00
3357	" 6.	Albert Martin	"	Gravenhurst, Ont.	Toronto, Ont.	2 00
3358	" 6.	George W. McDonald	"	Penetanguishene, Ont.	Penetanguishene, Ont.	2 00
3359	" 6.	George Edwin Scott	"	Guy'sboro, N.S.	Halifax, N.S.	2 00
3360	" 6.	Isaac Jas. Boynton	"	Bobcaygeon, Ont.	Kingston, Ont.	2 00
3361	" 6.	Arthur Seguin	"	Hudson, Que.	Montreal, Que.	2 00
3362	" 6.	Elyah Y. Drinkwater	3rd Class	Goderich, Ont.	Toronto, Ont.	5 00
3363	" 6.	Onesime Toupin	3rd "	Sorel, Que.	Montreal, Que.	5 00
3364	" 6.	John Jamieson	3rd "	Deseronto, Ont.	Kingston, Ont.	5 00
3365	" 6.	Wm. Henry Taylor	4th "	Hamilton, Ont.	Toronto, Ont.	5 00
3366	" 6.	Stanislas Roy	4th "	St. Henri, Que.	Montreal, Que.	5 00
3367	" 6.	Mathew G. Doyle	4th "	Halifax, N.S.	Halifax, N.S.	5 00
3368	" 6.	George Allard	4th "	St. Joseph de Sorel, Que.	Sorel, Que.	5 00
3369	" 6.	Wm. James Woffle	4th "	Westport, Ont.	Kingston, Ont.	5 00
3370	" 6.	Geo. Charles Tizzard	4th "	Owen Sound, Ont.	Toronto, Ont.	5 00
3371	" 6.	Fredk. Wm. Cope	4th "	Muskoka, Ont.	"	5 00
3372	" 6.	John A. Wilson	4th "	Collingwood, Ont.	"	5 00
3373	" 6.	James Lawrence	4th "	Parry Sound, Ont.	"	5 00
3374	" 14.	Arthur Poole	4th "	Selkirk, Man.	Rat Portage, O.	5 00
3375	" 14.	Walter Wells	4th "	Balmoral, Man.	Selkirk, Man.	5 00

\* Second Examination.



3-4 EDWARD VII. A. 1904

LIST of Certificates of Competency granted to Engineers of Steamboats, &c—*Con.*

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1903.					\$ cts.
3376	April 14.	Henry Stanley Dewar....	3rd Class....	Selkirk, Man.....	RatPortage,O.	5 00
3377	" 14.	James T. Eldridge.....	3rd ".....	Rat Portage, Ont.....	"	5 00
3378	" 14.	William John Leaney....	2nd ".....	West Selkirk, Man....	"	5 00
3379	" 14.	Walter D. Booker.....	Temporary....	Rat Portage, Ont. ....	"	2 00
3380	" 14.	C. G. Hanson.....	".....	".....	"	2 00
3381	" 14.	George Overend.....	".....	Manitoba, Ont....	"	2 00
3382	" 14.	Wm. George Chilton....	".....	Rat Portage, Ont....	"	2 00
3383	" 14.	Isaïe Poirier.....	".....	Point Fortune, Ont....	Montreal, Que.	2 00
3384	" 22.	James W. Brown.....	".....	Rat Portage, Ont. ....	RatPortage,O.	2 00
3385	" 22.	Gaster C. Stover.....	3rd Class.....	Vancouver, B.C.....	Vancouver,BC	5 00
3386	" 22.	William J. Douglas....	4th ".....	Selkirk, Man.....	RatPortage,O.	5 00
3387	" 22.	Matthews Gray.....	4th ".....	Vancouver, B.C.....	Vancouver,BC	5 00
3388	" 22.	Wm. Taylor Davie.....	4th ".....	Levis, Que.....	Quebec, Que..	5 00
3389	" 22.	Gustav Oelkers.....	1st ".....	Quebec, Que.....	"	5 00
3390	" 22.	Albert E. Stephenson....	Temporary....	Penetanguishene, Ont..	P. Sound, Ont	2 00
3391	" 22.	Arthur McCann.....	".....	Wallace, N.S.....	Halifax, N.S..	2 00
3392	" 22.	Hugh McMillan.....	4th Class.....	Sault Ste. Marie, Ont..	S Ste.Marie,O	5 00
3393	" 25.	James Logan.....	Temporary....	Peterboro, Ont.....	Kingston, Ont	2 00
3394	May 16.	Arthur Davis.....	".....	Poole's Resort, Ont.....	"	2 00
3395	" 16.	Jas. Charles Barry....	".....	Lefroy, P.O., Ont.....	Toronto, Ont..	2 00
3396	" 16.	Andrew Jas. Reid.....	".....	Rat Portage, Ont.....	RatPortage,O.	2 00
3397	" 16.	Fredk. Wm. Coates.....	".....	Fort Francis, Ont.....	"	2 00
3398	" 16.	Victor Riel.....	4th Class.....	Ottawa, Ont.....	Ottawa, Ont..	5 00
3399	" 26.	George Hill.....	Temporary....	Rat Portage, Ont.....	RatPortage,O.	2 00
3400	" 26.	James H. Wilson.....	".....	Fort Francis, Ont.....	F. Francis, Ont	2 00
3401	" 26.	Gabriel Bellefeuille....	".....	Winnipeg, Man.....	Winnipeg, M.	2 00
3402	" 26.	Chris. Watterson.....	".....	West Selkirk, Man....	Selkirk, Man..	2 00
3403	" 26.	Andrew Lajeunesse.....	".....	Peterboro, Ont.....	Peterboro, Ont	2 00
3404	" 26.	Luke Whalen.....	".....	Kingston, Ont.....	Kingston, Ont.	2 00
3405	" 26.	Wm. John Poole.....	".....	Poole's Resort, Ont.....	"	2 00
3406	" 26.	George Willis.....	".....	Carleton Place, Ont....	Carleton P.,O.	2 00
3407	" 26.	Peter Geo. Cavanagh....	".....	Perth, Ont.....	Montreal, Que	2 00
3408	" 26.	Wm. James McEntyre....	".....	Port Sydney, Ont.....	Toronto, Ont..	2 00
3409	" 26.	Fred. W. Pamphlet.....	3rd Class.....	Victoria, B.C.....	Victoria, B.C.	5 00
3410	" 26.	Wm James Jento.....	3rd ".....	Brockville, Ont.....	Kingston, Ont.	5 00
3411	May 29.	Sydney T. Hubbard.....	Temporary....	Edmonton, N.W.T....	Edmonton, N. W.T.....	2 00
3412	" 29.	John Edward Ball.....	".....	Caesarea, Ont.....	Lindsay, Ont..	2 00
3413	" 29.	Wm. Spicer.....	".....	Newboro, Ont.....	Kingston, Ont.	2 00
3414	" 29.	John Gonyea.....	".....	Smith Falls, Ont....	"	2 00
3415	" 29.	Joseph Bark.....	".....	Cornwall, Ont.....	"	2 00
3416	June 1.	Adélar St. Martin.....	4th Class.....	St. Joseph de Sorel, Que.	Quebec, Que..	5 00
3417	" 1.	Joseph Boulanger.....	4th ".....	Bienville, Que.....	"	5 00
3418	" 1.	Alfred Larocque.....	3rd ".....	Killarney, Ont.....	Cutler, Ont....	5 00
3419	" 1.	Zoël Lacroix.....	2nd ".....	Sorel, Que.....	Sorel, Que....	5 00
3420	" 1.	Alonzo W. Daball.....	Temporary....	Parry Sound, Ont.....	Parry Sound,O	2 00
3421	" 1.	Henry R. Annett.....	".....	Peninsula, Que.....	Quebec, Que..	2 00
3422	" 1.	Daniel O'Donnell.....	".....	Belleville, Ont.....	Belleville, Ont	2 00
3423	" 1.	James Clark.....	".....	Little Current, Ont.....	French Riv.,O.	2 00
3424	" 10.	Ludger Cyr.....	".....	Val des Bois, Ont.....	N.D.duLaus,Q	2 00
3425	" 10.	Frederick W. Calbick....	".....	Vancouver, B.C.....	Vancouver,BC	2 00
3426	" 10.	Geo. Morris Beecher.....	".....	Brockville, Ont.....	Brockville, Ont	2 00
3427	" 10.	John James Coones.....	".....	Bridge North, Ont.....	Kingston, Ont.	2 00
3428	" 10.	Alcime Baudet.....	3rd Class.....	St. Jean, Que.....	Sorel, Que....	5 00
3429	" 10.	Wm. H. Carefoot.....	3rd ".....	Collingwood, Q.....	Toronto, Ont..	5 00
3430	" 10.	Calixte C. Berlinguette..	3rd ".....	Quyon, Que.....	Quyon, Que...	5 00
3431	" 10.	Regis Cucrier.....	3rd ".....	Bristol, Que.....	Arnprior, Ont.	5 00
3432	" 10.	Walter Harris.....	4th ".....	Victoria, B.C.....	Victoria, B.C.	5 00
3433	" 22.	George R. McDonald.....	3rd ".....	Owen Sound, Ont.....	Toronto, Ont..	5 00
3434	" 22.	Donald Todd.....	3rd ".....	Vancouver, B.C.....	Vancouver,BC	5 00
3435	" 22.	Victor A. Eckstein.....	4th ".....	Esquimault, B.C.....	Victoria, B.C.	5 00
3436	" 22.	Frederic M. Young.....	Temporary....	Young's Point, Ont.....	Kingston, Ont.	2 00
3437	" 22.	Henry D. Hornibrook....	".....	Victoria, B.C.....	Victoria, B.C.	2 00
3438	" 22.	Robert Watson.....	".....	St. Roch, Que.....	Quebec, Que..	2 00



APPENDIX No. 13.

RECORD of Live Stock Shipped from Port of Montreal during the following Months  
of the Year 1903.

MAY.

No	Date.	Steamer.	Destination.	Sheep.	Cattle, stockers.	Total cattle.	Horses.	Hay for Feed.	Grain for Feed.	Number Men.
	1903.							Lbs.	Lbs.	
1	May 4.	Lake Champlain.	Liverpool ..			530				21
2	" 8.	Corinthian.....	" ..			738				30
3	" 10.	Salacia.....	Glasgow....			691	18			28
4	" 11.	Sarmatian .....	" ..			697				28
5	" 13.	Monarch.....	London....	317		875				36
6	" 14.	Ruthlin Head. .	Belfast. ....				3			1
7	" 14.	Fremona.....	London.....			301				12
8	" 14.	Turcoman .....	Liverpool ..			633				25
9	" 15.	Alcides .....	Glasgow....			584	17			26
10	" 15.	Montrose.....	Bristol and Liverpool ..		251 821	1,072				43
11	" 16.	Lake Erie.....	Liverpool ..			550				22
12	" 16.	Concordia.....	Glasgow....			540				22
13	" 16.	Orcadian.....	London.....			397				16
14	" 17.	Manr. Trader....	Manchester.			408				16
15	" 19.	Monterey ....	Liverpool & Bristol.....		709 349	1,058				43
16	" 20.	Manxman.....	Liverpool ..			503				20
17	" 20.	Devona.....	London. .	131		523				22
18	" 22.	Sardinian.....	Glasgow....			468				19
19	" 23.	Monte Videan ..	London.....	148		388				16
20	" 24.	Manr. Commerce.	Manchester.			513				21
21	" 24.	Marina .. .	Glasgow....			892	19			37
22	" 24.	Mount Royal. ...	London.....	160		1,094				44
23	" 24.	Hungarian.....	Liverpool ..			588				24
24	" 28.	Cervona.....	London.....			568				23
25	" 28.	Toronto .....	" ..			620				24
26	" 29.	Kastalia.....	Glasgow....			710	19			28
27	" 29.	Roman.....	Liverpool ..	576		892				38
28	" 30.	Mount Temple...	" ..			1,361				54
29	" 30.	Monteagle ...	Bristol and Liverpool ..			1,087				44
30	" 30.	Sicilian.....	Liverpool ..			690	16			29
31	" 31.	Michigan.....	London. .			660				26
32	" 31.	Manchester City.	Manchester.			873				35
33	" 31.	Ottoman.....	Liverpool ..	958		1,020				43
Total for May.				2,290		22,778	92	5,908,907	1,817,059	926

TOTAL Live Stock Shipments from the year 1903, were as follows :—

No.		Sheep.	Cattle.
29	Same date 1902.....	536	10,090
36	" 1901.....	8,454	11,332
31	" 1900.....	2,314	11,426
36	" 1899.....	3,365	12,983
46	" 1898.....	309	15,563



RECORD of Live Stock shipped from Port of Montreal, &c.—Continued.

JUNE.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle.	Horses.	Hay for Feed.	Grain for Feed.	Num- ber of Men.
1903.									
35	June 3..	Hurona .. . . .	London.....		563				22
36	" 4..	Lake Champlain....	Liverpool.....		530				21
37	" 4..	Birmingham.....	London.....	162	250				11
38	" 5..	Pomeranian.....	Glasgow.....		614				25
39	" 5..	Tritonia .. . . .	Liverpool.....	485	863				37
40	" 5..	Bellona .. . . .	New Castle.....		338				13
41	" 6..	Pretorian.....	Liverpool.....		389				15
42	" 6..	Livonian .. . . .	London .. . . .	276	769				32
43	" 7..	Yola.....	" .. . . .	46	298				11
44	" 7..	Kildena .. . . .	" .. . . .		293				12
45	" 10..	Norwegian.....	Glasgow .. . . .		650				26
46	" 11..	Lord Iveigh .. . . .	Cardiff .. . . .	320	326				14
47	" 11..	Tampican.....	Liverpool.....	265	648				27
48	" 11..	Manr. Importer.....	Manchester.....	584	507				23
49	" 12..	Lake Michigan.....	Liverpool.....		1,391				52
50	" 12..	Escalona.....	New Castle.....		303				13
51	" 13..	Lakonia .. . . .	Glasgow.....	288	803	18			34
52	" 14..	Iona .. . . .	London .. . . .		572				23
53	" 16..	Indiana .. . . .	" .. . . .	172	250				17
54	" 17..	Iberian .. . . .	Liverpool.....	216	539				22
55	" 17..	Corinthian.....	Glasgow .. . . .		714	17			29
56	" 18..	Lake Erie.....	Liverpool.....		538				22
57	" 19..	Alcides.....	Glasgow .. . . .		612				24
58	" 19..	Montrose .. . . .	Liverpool.....		1,081				44
59	" 20..	Kensington .. . . .	" .. . . .			1			1
60	" 20..	Milwaukee .. . . .	London .. . . .	912	928				44
61	" 21..	Mexican.....	" .. . . .		392				16
62	" 23..	Turcoman .. . . .	Liverpool.....		642				25
63	" 23..	Concordia .. . . .	Glasgow.....		542				21
64	" 24..	Fremona .. . . .	London .. . . .	142	508				21
65	" 24..	Buenos Ayrean.....	Glasgow.....		756				30
66	" 24..	Lord Lansdowne....	Cardiff .. . . .		223				9
67	" 25..	Oreadian .. . . .	London .. . . .		492				20
68	" 26..	Salacia .. . . .	Glasgow.....		708	16			29
69	" 27..	Montcalm .. . . .	Bristol .. . . .		1,067				43
70	" 28..	Devona .. . . .	London .. . . .	171	553				23
71	" 28..	Manr. Trader... .	Manchester.....	448	405				18
72	" 28..	Indian.....	Liverpool.....		850				34
Shipped in June.....				4,487	21,817	52	5,690,750	1,757,162	993
Previously reported.....				2,290	22,778	92	5,968,907	1,817,059	926
Total to date.....				6,777	44,595	144	11,599,657	3,574,221	

TOTAL Live Stock Shipments from the year 1898, were as follows :—

No.		Sheep.	Cattle.	Horses.
59	Same date, 1902.. . . .	8,277	20,243	237
67	" 1901.....	16,465	22,395	486
67	" 1900.....	7,131	25,377	1,399
75	" 1899.....	11,835	28,837	1,553
85	" 1898.....	2,682	28,899	2,894

MONTREAL, June 30, 1903.

POPE & DELORME,  
Inspectors.



SESSIONAL PAPER No. 21

RECORD of Live Stock shipped from Port of Montreal, &c.—Continued.  
JULY.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle.	Total.	Horses.	Hay for feed.	Grain for feed.	Number of men.
1903.										
73	July 1	Sardinian.....	Glasgow.....			468				19
74	" 1	Montreal.....	London. ....	1,852		882				44
75	" 2	Montevidean .....	" .....			406				16
76	" 3	Marina.....	Liverpool....			916				39
77	" 3	Man. Commerce.	Manchester.	723		523				24
78	" 3	Mount Temple...	Liverpool...	848		1,256				54
79	" 4	Monteagle .....	Liverpool .....		358	949				38
			Bristol. ....		591					
80	" 4	Cervona .....	London.....			589				23
81	" 4	Maunman.....	Liverpool....			521				21
82	" 5	Mount Royal.....	London....	2,201		827				43
83	" 8	Sicilian.....	Glasgow.....			680				28
84	" 9	Lake Champlain..	Liverpool....			532				21
85	" 9	Kastalia .....	Glasgow.....			726				29
86	" 10	Man. City.....	Manchester.	590		774	2			34
87	" 11	Pretorian.....	Liverpool....			386				15
88	" 11	Monterey.....	" .....		689	1,043				41
			Bristol. ....		354					
89	" 11	Ottoman.....	Liverpool....	800		1,002	1			42
90	" 11	Jacona .....	New Castle.			244				10
91	" 11	Hurona .....	London.....	282		529				22
92	" 14	Monmouth .....	" .....	1,734		381				23
93	" 15	Hungarian....	Glasgow.....			579	10			24
94	" 16	Tritonia .....	Liverpool....	598		859				37
95	" 17	Lake Michigan..	" .....	599		876				38
96	" 18	Kildona .....	London....	184		269				12
97	" 18	Montfort .....	Liverpool....	281	635	993				40
			Bristol .....		350					
98	" 21	Livonian .....	London.....	720		555				26
99	" 22	Corinthian. ....	Glasgow .....			571				23
100	" 23	Iberian. ....	Liverpool....	214		539	1			23
101	" 23	Lake Erie.....	" .....			540				23
102	" 24	Montezuma....	London.....	1,924		959				51
103	" 25	Montrose.....	Liverpool....		545	985				36
			Bristol. ....		350					
104	" 25	Iona .....	London.....	444		520	2			23
105	" 29	Pomeranian....	Glasgow.....			616				25
106	" 29	Lord Iveigh.....	Cardiff.....	157		360				15
107	" 30	Alcides.....	Glasgow.....	160		592				24
108	" 23	Escalona .....	New Castle.			240				9
109	" 26	Lakonia.....	Glasgow.....			793	29			34
110	" 31	Bellona.....	New Castle.			273				9
111	" 31	M. Corporation	Liverpool....		200	712				28
			Manchester.		512					
112	" 31	Concordia.....	Liverpool....			538				21
Total for July.....				14,311		25,903	45	6,939,180	2,210,272	1,105
Previously reported...				6,777		44,595	144	11,599,657	3,574,221	1,829
				21,088		70,498	189	18,538,837	5,784,493	2,934

TOTAL Live Stock Shipments from the year 1902, were as follows :—

No.		Sheep.	Cattle.	Horses.	No.		Sheep.	Cattle.	Horses.
90	Same date 1902.....	16,273	30,532	313	114	Same date 1899.....	19,393	43,526	2,353
98	" 1901.....	25,781	32,742	718	132	" 1898. ....	7,893	44,885	3,665
103	" 1900.....	13,259	39,812	1,651					

\* Rudder broken backing out from wharf ; cattle trans-shipped to Pomeranian July 31.



RECORD of Live Stock shipped from Port of Montreal, &c.—*Continued.*

AUGUST.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle, stockers.	Cattle Total.	Horses.	Hay for feed	Grain for feed.	Num- ber of men.
1904.										
113	Aug. 1.	Montcalm.....	Bristol..			992				38
114	" 1.	Milwaukee .....	London....	1449		781				37
115	" 1.	Fremona.....	"			532				21
116	" 2.	Toronto.....	"			599				24
117	" 3.	Turcoman.....	Liverpool...	507		588				25
118	" 5.	Sardinian.....	"			500				20
119	" 5.	Birmingham. ...	London:...			278				11
120	" 6.	Salacia.....	Glasgow....	12		719				29
121	" 7.	Mount Temple. .	Liverpool...			1003				39
122	" 7.	Orcadian.....	London....	500		498				22
123	" 7.	Manr. Trader....	Manchester.	446		391				17
124	" 8.	Devona.....	London....			565				23
125	" 8.	Monteagle .....	Liverpool... Bristol.....		635 250	885				33
126	" 9.	Pomeranian.....	Liverpool...			490				20
127	" 11.	Montevidean.....	London....	181		385				16
128	" 12.	Sicilian.....	Glasgow ..			725				29
129	" 13.	Lake Champlain.	Liverpool...			522				21
130	" 13.	Marina.....		152		776	16			32
131	" 14.	Indiana.....	London....	400		250				12
132	" 15.	Cervona .....	"			574				23
133	" 15.	Pretorian .....	Liverpool...			373				15
134	" 15.	Manxman .....	"	162		500				26
135	" 16.	Montreal.....	London. ...	1291		871				41
136	" 29.	Lord Landsdowne	Cardiff..	159		206				8
137	" 19.	Hungarian.....	Liverpool...			570	17			24
138	" 20.	Kastalia.....	Glasgow....			726				29
139	" 21.	Lake Michigan..	Liverpool...			896				36
140	" 21.	Manr. City....	Manchester. Liverpool...	1061	444 427	871				40
141	" 22.	Hibernian.....	London....			633				25
142	" 22.	Mount Royal....	"	363		978				40
143	" 22.	Hurona.....	"	285		536	1			23
144	" 23.	Montfort.....	Liverpool... Bristol.....		572 251	823				33
145	" 26.	Corinthian .....	Glasgow..			738				29
146	" 26.	Aboukir.....	London....			125				5
147	" 37.	Lake Erie.....	Liverpool...			525				21
148	" 27.	Tritonia .....	"	327		812				34
149	" 29.	Iberian.....	"	235		541				23
150	" 29.	Kildona.....	London....			296				11
151	" 30.	Monmouth....	Liverpool... Bristol.....		330 250	580				22
Total for August.				7,521	2274	23,653	34	6,341,150	1,721,694	971
Previously report.				21,088		70,498	189	18,538,877	5,784,493	2,934
Total to date				28,609		94,151	223	24,879,987	7,506,187	3,905

TOTAL Live Stock Shipments from the year 1899, were as follows :—

No.		Sheep.	Cattle.	Horses.
123	Season of 1902.....	21,256	43,340	354
131	" 1901.....	31,387	45,239	848
147	" 1900.....	16,395	56,498	2,242
152	" 1899.....	30,810	56,240	3,143



SESSIONAL PAPER No. 21

RECORD of Live Stock shipped from Port of Montreal, &c.—*Continued.*

SEPTEMBER.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle, stockers.	Total Cattle.	Horses.	Hay for Feed.	Grain for Feed.	Number of M
152	Sept. 2.	Buenosayrean	Glasgow			749				30
153	" 3.	Lakonia	"			832	11			34
154	" 4.	Montrose	Liverpool		800	1,050				42
			Bristol		250					
155	" 5.	Iona	London	316		532				21
156	" 9.	Sardinian	Glasgow			506				20
157	" 9.	Man. Importer	Manchester	397		512				22
158	" 10.	Concordia	Liverpool			540				22
159	" 10.	Alcides	"	286		550				23
160	" 10.	Orcadian	London			549				22
161	" 10.	Montezuma	"	1,394		1,027				47
162	" 11.	Mount Temple	Liverpool			1,220	7			48
163	" 12.	Turcoman	"			640				24
164	" 12.	Fremona	London	399		427				18
165	" 13.	Jacona	New Castle			255				9
166	" 13.	Montcalm	Liverpool	148	807	1,039				42
			Bristol		232					
167	" 13.	Man. Corporation	Manchester			664				27
168	" 17.	Lake Champlain	Liverpool			519				21
169	" 17.	Salacia	Glasgow			597				24
170	" 17.	Sicilian	Liverpool			723	2			29
171	" 18.	Milwaukee	London	953		834	1			37
172	" 19.	Pretorian	Liverpool			387				16
173	" 20.	Montevidean	London			485				19
174	" 20.	Devona	"			565				22
175	" 20.	Monteagle	Liverpool		751	1,003				40
			Bristol		252					
176	" 24.	Hungarian	Glasgow			593				24
177		Man. Commerce	Manchester	1,085		547				26
178		Man. Engineer	London	900		192				12
179	Sept. 25.	Marina	Glasgow			671				27
180		Lake Michigan	Liverpool			891				36
181	Sept. 26.	Monarch	South Africa			199	1			8
182	" 27.	Cervona	London	440		521				23
183		Toronto	"			600				24
184		Montford	Liverpool		747	997				40
			Bristol		250					
185		Manxman	Liverpool			521				20
186	Sept. 30.	Montreal	London	315		988				41
Total for Sept.				6,633		22,916	22	6,624,865	1,379,350	940
Prev. reported.				28,609		94,151	223	24,879,987	7,506,187	3,905
Total to date.				35,242		117,067	245	31,504,852	8,885,537	4,845

TOTAL Live Stock Shipments from the year 1899, were as follows :—

No.		Sheep.	Cattle.	Horses.
156	Same date 1902	31,364	54,912	418
161	" 1901	35,688	57,754	959
184	" 1900	23,686	70,216	2,421
185	" 1899	43,758	65,496	3,695

POPE & DELORME,

MONTREAL, September 30, 1903.

*Inspectors*



RECORD of Live Stock shipped from Port of Montreal, &c.—Continued.

OCTOBER

No.	Date.	Steamer.	Destination.	Sheep.	Cattle.	Total.	Horses.	Hay for Feed.	Grain for Feed.	Num- ber of Men.
1903.										
187	Oct. 1.	Pomeranian.	Glasgow.			489				23
188		Hibernian.	London.			596				24
189		Lake Erie.	Liverpool.			520				21
190		Manchester City.	Manchester.	899		607				28
191	Oct. 3.	Kastalia.	Glasgow.			465	16			19
192		Hurona.	London.	1,058		437				22
193	Oct. 4.	Lord Lansdowne.	Cardiff.	155		206				8
194		Monmouth	Bristol.	230		180				8
195	Oct. 7.	Birmingham.	London.	150		270				12
196	" 8.	Corinthian.	Glasgow.			519				22
197		Tritonia.	Liverpool.			461				18
198	Oct. 10.	Mt. Royal.	London.	1,280		856				40
199		Kildona		708		211				11
200		Ottoman.	Liverpool.	718		821				36
201	Oct. 11.	Man. Shipper.	Manchester.			402				16
202		Montrose.	{ Bristol and Liverpool.	180 741		921				37
203	Oct. 14.	Sardinian.	Glasgow.			400				16
204	" 15.	Lakonia.	"			437	13			18
205	" 16.	Mt. Temple.	Liverpool.			770				31
206		Montcalm	{ Bristol and Liverpool.	180 321		501				20
207	Oct. 17.	Ontarian.	Liverpool.			459				19
208		Iona	London.	1,369		308				19
209	Oct. 18.	Concordia.	Liverpool.			539				22
210	" 22.	Alcides	Glasgow.			286				11
211	" 22.	Lake Champlain.	Liverpool.			319				13
212		Sicilian.	Glasgow.			535				21
213		Orcadian.	London.	1,216		116				10
214		Manr. Corporat'on	Manchester.			325				13
215	Oct. 24.	Turcoman.	Liverpool.			642				25
216		Pretorian.	"			300				12
217	Oct. 25.	Montezuma.	London.	1,276		557				28
218		Fremona.	"	1,500		298				18
219		Monteagle.	{ Bristol and Liverpool.	399 180		579				23
220	Oct. 28.	Aboukir.	London.			300				12
221	" 29.	Hungarian.	Liverpool.			360				14
222	" 30.	Salacia	Glasgow			366				14
223		Lake Michigan	Liverpool.			465				19
224		Devona.	London.	1,267		411	3			22
225	Oct. 31.	Montevidean.	"	1,350		252				16
226		Wyandotte	C. Town, S. A.			112	64			8
Total for October.				13,376		17,598	96	5,540,170	1,096,523	769
Previously reported.				35,242		117,067	245	31,504,852	8,885,537	4,855
Total to date				48,418		134,662	341	37,045,022	9,982,060	5,624

TOTAL Live Stock Shipments from the year 1899, were as follows:—

No.		Sheep.	Cattle.	Horses.
181	Same date, 1902.	38,561	64,808	458
190	" 1901.	41,415	67,704	1,160
217	" 1900.	29,413	81,976	2,710
215	" 1899.	52,605	75,373	4,452

MONTREAL, October 31, 1903.

POPE & DELORME, *Inspectors.*



SESSIONAL PAPER No. 21

RECORD of Live Stock shipped from Port of Montreal, &c.—Continued.

NOVEMBER.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle stockers.	Total Cattle.	Horses.	Hay for feed.	Grain for feed.	Number Men.
1903.										
227	Nov. 4.	Milwaukee .....	London.....	2,351		595				34
228	" 5.	Pomeranian.....	Glasgow.....			492				20
229	" 5.	Man. Commerce..	Manchester..	451		326				16
230	" 5.	Lake Erie.....	Liverpool...			200				8
231	" 5.	Montfort.....	Livpl. Brist.	*444	355 180	535				23
232	" 6.	Marina.....	Liverpool...			610				25
233	" 7.	Manxman.....	"			522				21
234	" 7.	Cervona.....	London.....	1,425		394				23
235	" 12.	Hibernian.....	Liverpool...			358				14
236	" 12.	Montreal.....	London.....	1,059		514				26
237	" 12.	Kastalia.....	Glasgow.....	13		426				17
238	" 13.	Lord Lansdowne.	Cardiff.....	140		205				9
239	" 14.	Corinthian.....	Liverpool...			513	17			21
240	" 14.	Roman.....	"	1,150		701				33
241	" 14.	Hurona.....	London.....	613		494				23
242	" 15.	Monmouth.....	"	733		292				15
243	" 17.	Montrose.....	Livpl. Brist.	756	301 137	438				21
244	" 18.	Sardinian.....	Glasgow ..			387				15
245	" 18.	Tritonia.....	Liverpool ..			449	12			19
246	" 19.	Bellona.....	"			278				11
247	" 19.	Man. City. .	Manchester.	75		335				14
248	" 20.	Ottoman.....	Liverpool ..	930		384				20
249	" 21.	Brazilian.....	London....	615		388				18
250	" 21.	Mount Temple...	"	994		518				15
251	" 22.	Lakonia.....	Liverpool ..			452				18
252	" 22.	Man. Importer...	Manchester.			260				10
253	" 22.	Kildona.....	London.....	161		280				12
254	" 23.	Montcalm....	Liverpool ..	689		548				25
255	" 23.	Milville.....	Cape Town..			182	3			8
256	" 24.	Ontarian.....	Liverpool ..			460				19
Total for November.. . . .				12,599		12,536	32	4,265,143	849,650	563
Previously reported . . . .				48,418		134,665	341	37,045,022	9,982,060	5,624
Total for season of 1903... .				61,017		147,201	373	41,310,165	10,831,710	6,187

Total Live Stock Shipments from the year 1892 were as follows :—

No.		Sheep.	Cattle.	Horses.
214	Season of 1902. . . . .	45,830	77,156	549
214	" 1901. . . . .	54,538	73,791	1,338
248	" 1900. . . . .	34,838	92,180	2,833
239	" 1899. . . . .	58,277	81,804	4,739
298	" 1898. . . . .	34,991	99,189	5,283
304	" 1897. . . . .	60,638	117,247	10,051
242	" 1896. . . . .	76,520	96,448	10,421
224	" 1895. . . . .	210,607	94,972	13,303
229	" 1894. . . . .	137,780	88,635	5,623
235	" 1893. . . . .	3,743	83,322	16,666
260	" 1892. . . . .	15,914	98,731	1,739

\* Liverpool, sheep 141 ; Bristol, sheep 303.



3-4 EDWARD VII. A. 1904

RECORD of Live Stock shipped from Port of Halifax, N.S., during month of December 1902.

No.	Date.	Steamer.	Destination.	Fat.	Total.	Hay for Feed.	Grain For Feed.	Number Men.
1902.								
20	Dec. 24..	Peruvian.....	Liverpool.....	260	260	64,100	20,800	10

GEO. McKERROW, *Deputy Port Warden.*

RECORD of Live Stock shipped from Port of Halifax, N.S., during the year 1903.

No.	Date 1903.	Steamer.	Destination.	Sheep	Cattle Fat.	Total Cattle	Cattle Lost.	Horses Shipped.	Hay for Feed.	Grain For Feed.	Number Men.
1903.											
1	Jan. 15..	Tritonia....	Liverpool & Glasgow.	426	611	611	.....	16	179,040	47,921	26
2	Feb. 6..	Peruvian...	Liverpool...	.....	211	211	.....	.....	68,800	9,000	8
3	" 10..	Florence...	London.....	.....	.....	.....	.....	1	255	220	1
4	" 16..	Lake Erie...	Liverpool...	.....	147	147	...	.	38,661	11,025	6
5	Mar. 4..	Tritonia....	" .....	.....	331	331	1	.....	92,680	26,480	14
6	" 26..	Peruvian...	" .....	.....	277	277	.....	.....	77,325	22,200	11
7	April 10..	Kastalia....	Glasgow.....	.....	725	725	..	.....	175,800	57,800	29
8	May 2..	Peruvian...	Liverpool..	.....	281	281	4	.....	67,825	28,000	11
9	June 10..	" .....	" .....	.....	305	305	.....	.....	75,865	24,000	12
10	July 22..	" .....	" .....	.....	305	305	3	.....	75,216	24,000	12
11	Sept. 5..	" .....	" .....	.....	305	305	...	.....	76,285	24,400	13
12	Nov. 30..	Pretorian..	" .....	.....	*358	358	...	..	79,138	28,600	14
				426	3,856	3,856	8	17	1,006,880	303,646	157

\* 88 were United States cattle.

DAVID HUNTER, *Port Warden.*

RECORD of Live Stock shipped from Port of Charlottetown during the following Months, 1903.

OCTOBER.

No.	Date.	Steamer.	Destination.	Sheep.	Cattle, Fat.	Hay for Feed.	Grain for Feed.	Number of Men.
1903.								
6	Oct. 16...	Manchester Shipper.....	Manchester...	283	4	70 bails	5 bags,	3
6	" 16...	" .....	" .....	.....	.....	30 bus., Turnips.	Grain.	

NOVEMBER.

6	Nov. 28..	Manchester Engineer....	Manchester..	1,645	6	12 tons.	18 bags.	4
6	" 28..	" .....	" .....	.....	.....	.....	Grain.	

H. P. WELSH, *Inspector.*



SESSIONAL PAPER No. 21

RECORD of Cattle Shipments from the Port of St. John, N.B., during Season of 1902 and 1903.

Date.	SHEEP.		CATTLE.				HORSES.		Hay. for Feed.	Grain for Feed.	Num- ber Men.
	Shipped	Lost.	Fat.	Stock- ers.	Total.	Lost.	Ship- ped.	Lost.			
December 1902.	3,306	28	4,557	194	4,751	16	34	...	1,351,665	325,806	204
January 1903..	3,846	65	4,975	155	5,130	28	1	....	1,462,150	406,754	219
February 1903.	4,149	164	7,150	99	7,249	47	33	.....	2,024,460	626,696	316
March 1903....	1,861	76	6,795	140	6,935	58	31	...	1,945,355	594,500	290
April 1903.....	124	3	6,225	55	6,280	49	.....	.....	1,626,145	504,020	252
July 1903. ....	.....	.....	1,234	...	1,234	2	...	.....	365,735	90,190	49
November 1903	564	.....	482	...	482	1	.....	.....	147,940	28,400	23
December 1903.	5,460	117	5,040	352	5,392	25	16	.....	1,753,070	532,976	247
	19,310	448	36,458	995	37,453	206	115	...	10,676,520	3,109,252	1,600

F. J. HARDING,  
*Agent.*

RETURN of Cattle and Sheep shipped at Quebec during the year 1903, as follows :—

Months.	Steamers.	Cattle.	Sheep.
April 30...	Iberian.....	527	.....
May 10....	Manhattan .....	770	.....
" 20 ...	European .....	800	.....
" 26....	Austriana.....	197	.....
June 5....	Manchester Engineer. ....	288	.....
" 5....	American.....	900	.....
July 18....	Manhattan.....	875	1,266
" 25....	Manchester Engineer. ....	292	.....
" 30 ...	European.....	333	.....
Aug. 2....	Austriana... ..	237	.....
" 8....	Tampican.....	574	608
" 16....	Manchester Engineer.....	533	355
" 22....	American.....	350	443
" 28....	Manchester Shipper.....	513	.....
Sept. 17....	Alexandrian.....	430	.....
Oct. 14....	Tampican.....	249	621
" 21....	Indiana.....	266	155
" 30....	Virginian.....	230	.....
Nov. 15....	Alexandrian .....	220	.....
" 21 ...	Ottoman .....	248	.....
Dec. 6 ...	Toronto.....	300	.....
		9,132	3,448



APPENDIX No. 14.

STATEMENT giving Stations and names of Light Keepers, &c., in the Dominion.  
ABOVE MONTREAL.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Armstrong, John .....	Kaministiquia River.....	April 28, 1894..	250 00
Alexander, Andrew.....	Lamb Island.....	" 26, 1897..	*400 00
Allard, Michel.....	Lake St. Louis, Lightship No. 3.....	June 3, 1901..	300 00
Baechler, F .....	South River.....	July 2, 1903..	80 00†
Baker, Henry F.....	Clapperton Island.....	Dec. 2, 1895..	350 00
Boyd, Robert P. ....	Cole Shoal.....	April 9, 1884..	250 00
Royd, Wm. S.....	Griffith Island .....	May 14, 1889..	350 00
Butler, Silas L.....	Port Dover.....	July 15, 1897..	360 00
Baxter, Wm. I.....	Brebeuf Island.....	Nov. 23, 1885..	375 00
Beaulieu, Octave.....	Point à Cadieux.....	July 26, 1892..	150 00
Boucher, François.....	Aylmer Island .....	Nov. 17, 1882..	175 00
Bamford, Robert.....	Bamford Island.....	June 21, 1888..	250 00
Bertrand, Félix.....	Coulonge Lake.....	Mar. 16, 1885..	100 00
Boyd, Wm. M.....	Kagawong. ....	April 13, 1893..	72 00
Boyter, A. B.....	Narrow Island.....	Jan. 3, 1898..	250 00
Boyter, David .....	Little Current.....	April 22, 1902..	350 00
Brown, Adam .....	Red Rock, Parry Sound.....	May 25, 1899..	450 00
Ball, J. H.....	Manitoulin Island Light and Fog Alarm. ....	" 7, 1900..	600 00
Black, W. H.....	Kingsville Range.....	July 27, 1902..	150 00
Borrow, Mrs. E. B.....	French river.....	Jan. 30, 1903..	500 00
Campbell, Thos.....	Burlington Beach .....	April 1, 1875..	350 00
Collins, Allen.....	Christian Island .....	Mar. 25, 1891..	435 00
Cross, Manly R.....	Gananoque Narrow and Jack Straw Shoal.....	Aug. 25, 1896..	480 00
Campbell, Robert.....	Goderich .....	June 9, 1886..	400 00
Craig, Wm.....	Thunder Cape.....	May 17, 1892..	600 00
Cook, Seldon B.....	Long Point East End Light and Fog Alarm.....	June 9, 1897..	700 00
Campbell, John.....	McTavish Point.....	Nov. 18, 1896..	100 00
Clark, Sarah.....	Nottawasaga Island.....	Jany. —, 1903..	500 00
Crevier, Dolphis.....	Pointe Claire .....	May 11, 1888..	200 00
Cartier, H. J.....	River Thames.....	Oct. 19, 1884..	425 00
Cooper, John.....	Port Arthur.....	" 14, 1882..	300 00
Cosgrove, George.....	Victoria Island, Lake Superior.....	Nov. 14, 1889..	350 00
Columbus, Christopher ..	Penetanguishene and Whiskey Island .....	Mar. 18, 1893..	300 00
Conover, Forrest H. C.....	Leamington.....	April 24, 1883..	150 00
Cox, John.....	Morrison or Hawley Island.....	June 22, 1887..	100 00
Chabot, Joseph.....	Papineauville Range Lights.....	" 17, 1897..	100 00
Connors, Frank.....	Point Pleasant.....	Oct. 13, 1898..	200 00
Chase, H. J.....	Weller's Bay.....	Nov. 4, 1898..	150 00
Crespin, Vital .....	Lake St. Louis, Lightship No. 2.....	June 3, 1901..	300 00
Casgrain, Mrs. Kate .....	Stonehouse Point gas Light.....	May 29, 1903..	36 00
Currie, Archibald .....	Tobermory .....	Oct. 12, 1903..	250 00
Cowan, Thomas M.....	Stag Island Shoal .....	Nov. 3, 1903..	150 00
Chapman, Richard.....	Cape Croker Lt and Fog Alarm .....	" 13, 1902..	650 00
Daviau, Joseph .....	Corbay Point .....	May 27, 1890..	350 00
Durnan, George.....	Gibraltar Point .....	" 31, 1854..	625 00
Daviau, Hyacinthe.....	Michipicoten Island.....	July 1, 1881..	400 00
Doaust, Dosithée .....	McKie Point.....	Sept. 21, 1893..	175 00
Davis, John H. ....	Pigeon Island.....	May 16, 1896..	350 00
Dick, Andrew.....	Point Porphyry.....	Aug. 10, 1880..	400 00
Dutcher, Samuel.....	Meaford.....	May 7, 1877..	150 00
Darling, Thomas.....	Southeast Bay.....	July 1, 1890..	60 00
Dixon, Joseph G.....	Rosseau.....	" 21, 1890..	100 00
Deault, Alphonse.....	Beauharnois Lights.....	April 14, 1903..	‡200 00

Allowance \$10.    †Allowance \$100.    ‡Allowance \$60.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*ABOVE MONTREAL—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Demers, Wilbrod. . . . .	Caribou Island Light and Fog Alarm . . . . .	May 10, 1899. . . . .	800 00
Dulmage, Dorland. . . . .	False Ducks. . . . .	" 19, 1903. . . . .	350 00
Ead, Mrs. C. . . . .	Port Stanley . . . . .	Aug. —, 1890. . . . .	300 00
Felan, Maurice. . . . .	Oakville Pier. . . . .	April 28, 1894. . . . .	150 00
Fortier, David H. A. . . . .	Port Colborne Range Lights and Fog Alarm. . . . .	" 11, 1865. . . . .	550 00
Fellowes, W. R. . . . .	Rondeau Harbour. . . . .	Dec. 18, 1888. . . . .	350 00
Filiatreault, Thomas. . . . .	Coteau Landing. . . . .	May 27, 1890. . . . .	140 00
Fraser, John. . . . .	Wind Mill Point. . . . .	Dec. 13, 1901. . . . .	180 00
Fortier, Theodore. . . . .	Pelee Passage, Lake Erie, Light & Fog Siren. . . . .	Sept. 31, 1902. . . . .	250 00
Gloude, Benjamin. . . . .	Dorval. . . . .	Sept. 7, 1872. . . . .	300 00
Gillespie, Wm. . . . .	Wolf Island. . . . .	Mar. 16, 1885. . . . .	250 00
Gauthier, Charles. . . . .	St. Placide. . . . .	May 6, 1874. . . . .	140 00
Gordon, Robert. . . . .	Cobourg. . . . .	" 16, 1883. . . . .	180 00
Griffith, Alfred H. . . . .	Giant Tomb. . . . .	Sept. 17, 1898. . . . .	250 00
Gourley, John, jr. . . . .	Manitowaning. . . . .	July 3, 1900. . . . .	150 00
Gilbert, Philip. . . . .	Wiarton Pole Light. . . . .	Sept. 5, 1902. . . . .	75 00
Hackett, Mrs. A. . . . .	Bois Blanc. . . . .	June 27, 1901. . . . .	435 00
Hamilton, John. . . . .	Hamilton Island. . . . .	Sept. 3, 1873. . . . .	130 00
Hill, Thomas H. . . . .	Lancaster Pier. . . . .	July 1, 1877. . . . .	325 00
Haitze, Jean. . . . .	Lonely Island. . . . .	May 11, 1885. . . . .	450 00
Hunter, David. . . . .	Port Dalhousie. . . . .	Oct. 29, 1879. . . . .	350 00
Hawkins, David B. . . . .	Peninsula Harbour. . . . .	Aug. 31, 1891. . . . .	500 00
Harvey, James. . . . .	Thessalon. . . . .	Nov. 22, 1897. . . . .	300 00
Hamilton, Thos. . . . .	Pie Island. . . . .	April 15, 1899. . . . .	75 00
Humes, David. . . . .	Stribling Point Range Lights. . . . .	Aug. 27, 1902. . . . .	180 00
Hendricksen, Mrs. . . . .	Sulphur Island. . . . .	June 18, 1901. . . . .	325 00
Johnson, Isaac S. . . . .	Cherry Island. . . . .	Nov. 5, 1883. . . . .	300 00
Jeffrey, Carson. . . . .	Nigger Island Shoal. . . . .	April 28, 1894. . . . .	200 00
Kingston City Clock. . . . .	Corporation of Kingston. . . . .	1844. . . . .	*100 00
King, Peter. . . . .	Slate Island Light. . . . .	Nov. 17, 1903. . . . .	400 00
Knapp, Charles. . . . .	Lion's Head Whf. Lt. . . . .	Oct. 28, 1903. . . . .	75 00
Kennedy, James. . . . .	Lower Narrows, Ottawa River. . . . .	May 23, 1887. . . . .	100 00
Lambert, Wm. McGregor. . . . .	Chantry Island. . . . .	Oct. 1, 1880. . . . .	500 00
Labelle, Louis. . . . .	Deep River Island. . . . .	May 5, 1897. . . . .	100 00
Lamorendière, Pierre Régis de. . . . .	Killarney. . . . .	Sept. 24, 1880. . . . .	400 00
Léger, Thomas. . . . .	Lachine Pier. . . . .	July 14, 1897. . . . .	250 00
Lamondin, Louis. . . . .	Byng Inlet. . . . .	" 30, 1901. . . . .	375 00
Lee, John. . . . .	Southampton. . . . .	Oct. 7, 1882. . . . .	150 00
Lokerbie, Andrew. . . . .	Collingwood Harbour. . . . .	May 4, 1883. . . . .	300 00
Lowe, Robert. . . . .	Thornbury. . . . .	April 12, 1887. . . . .	80 00
Lowry, Robert M. . . . .	Port Elgin. . . . .	Mar. 14, 1896. . . . .	80 00
Lumsden, A. C. . . . .	Lake Temiscamingue Lights. . . . .	Oct. 6, 1890. . . . .	250 00
Lidwill, John R. . . . .	Pelee Island. . . . .	July 10, 1899. . . . .	300 00
Lawson, Colin P. . . . .	Middle Island. . . . .	Oct. 17, 1898. . . . .	240 00
Lacroix, H. . . . .	Oka. . . . .	Nov. 1898. . . . .	100 00
Laberge, Albert. . . . .	Green Shoal. . . . .	May 20, 1902. . . . .	200 00
Manson, Wm. A. . . . .	Pelé Passage, Lake Erie, Light & Steam Siren. . . . .	Nov. 11, 1902. . . . .	300 00
Munroe, John Jacob. . . . .	Lancaster Bar. . . . .	June 8, 1892. . . . .	300 00
Masson, Lucas H. . . . .	Pointe aux Anglais. . . . .	Sept. 4, 1897. . . . .	200 00
Mongeon, Charles A. . . . .	Way Shoal. . . . .	May 23, 1887. . . . .	100 00
Matheson, Norman. . . . .	Cape Robert, Algoma. . . . .	Oct. 7, 1896. . . . .	350 00
Miller, John. . . . .	Port Crédit. . . . .	Dec. 16, 1897. . . . .	150 00
Morrisseau, Jonathan. . . . .	Ferris Island. . . . .	Mar. 24, 1898. . . . .	150 00
Matheson, Angus. . . . .	Gore Bay. . . . .	July 10, 1903. . . . .	350 00
Manson, John. . . . .	Colchester Reef. . . . .	May 1, 1880. . . . .	600 00
Morrisseau, Michael. . . . .	Rainy River, Algoma. . . . .	June 9, 1886. . . . .	†250 00

\* Allowance of \$3.50 per 1,000 ft. for gas.

† Allowance \$30.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Martin, Wm. J.	Boyd Island	July 5, 1890	250	00
Miron, Louis	Gargantua	Oct. 26, 1889	450	00
Murray, William	Barriefield Range Lights	May 17, 1900	150	00
Montgomery, William	Toronto Harbour, Eastern Channel	Oct. 16, 1895	300	00
Mallette, B.	Lake St. Louis Lightship No. 1	April 30, 1901	250	00
Mason, F. E.	Long Point, West End	June 3, 1901	400	00
Manders, Samuel	Lower Allumette Lake	July 26, 1901	100	00
Martin, Edward	Michael Point	June 3, 1902	120	00
Michigan Land & Lumber Co.	Blind River	Sept. 8, 1900	80	00
McKillop, John	Campbell Island	April 2, 1892	150	00
McIntosh, John	Arnprior Island	" 2, 1892	150	00
McKenzie, John	Presqu'Isle, Owen Sound, Georgian Bay	July 14, 1873	100	00
McDonald, Murdock	Point Clark	Jan. 8, 1897	375	00
McDonald, Amos	Salmon Point	July 12, 1897	300	00
McKillop, Donald	St. Anicet	June 8, 1892	230	00
McLaren, Allen J.	Brown or Knapp Point	Feb. 11, 1896	180	00
McKay, Chas. S.	Battle Island	Aug. 27, 1877	500	00
McKenzie, Wm.	Strawberry Island	May 17, 1893	300	00
McQuestion, Mrs. Maria	McQuestion Point	June 9, 1886	100	00
McAulay, Donald	Saugeen River	Mar. 16, 1899	80	00
McDonald, Lauchlin, D.	Mississagua Island	May 16, 1896	450	00
McCool, James	Fort William Beacon Light, Ottawa River	" 23, 1887	90	00
McDevitt, Chas.	Point au Baril	Mar. 1, 1897	300	00
McKay, John	Lyal Island	Oct. 27, 1884	450	00
McLean, Arch.	Owen Sound	Dec. 23, 1897	126	00
McGaw, Thos.	Kincardine	June 13, 1899	375	00
McDougall, Neil	Squaw Island	April 25, 1901	200	00
McKinnon, R. F.	Point aux Pins	" 1, 1902	400	00
McLeod, Kenneth	Isle of Coves	June 19, 1903	750	00
McMenemy, Robt.	Otter Island	Nov. 17, 1903	400	00
Quellette, Godfrey	Buckom Point	May 1, 1884	180	00
O'Brien, Matthew	Frenchman's Bay	Oct. 13, 1898	125	00
O'Conner, P.	Bishops Bay, Algoma	April 13, 1899	150	00
Purvis, John	Great Duck Island Light and Fog Alarm	Mar. 9, 1898	*500	00
Pettypiece, Stephen	Lime Kiln Crossing	May 11, 1888	350	00
Prosser, John	Muskoka or Fox Island	Sept. 14, 1896	250	00
Proudfoot, Thos.	East Neebish, Upper Range	Nov. 4, 1898	100	00
Parker, John, jr.	Flower Pot Island	June 15, 1903	300	00
Darlington Pier Lt.	Port Darlington Co.		160	00
Root, Albert	Grenadier Island	Dec. 15, 1863	250	00
Roddick, Robert	Gull Island	Mar. 1872	500	00
Row, Geo. Albert	Telegraph Island	Oct. 25, 1895	200	00
Robillard, Honoré	Isle Perrot	Jan. 25, 1897	100	00
Redmond, William H.	Gravenhurst Narrows	June 18, 1894	100	00
Rains, Evan	Shoal Point, Algoma	Nov. 24, 1884	250	00
Rains, A. M.	Sailors' Encampment	Aug. 1892	17	00
Rains, W. W.	Rains Wharf Range	" 1892	17	00
Ritchie, John A.	South Bay Mouth	Sept. 10, 1903	150	00
Rowan, James	Victoria Island, Galetta	Dec. 3, 1898	100	00
Richardson, Wm. T.	Michipicoten Hr., Algoma	Sept. 27, 1900	200	00
Richardson, Thos. J.	Western Islands Light and Fog Alarm	June 27, 1901	750	00
Richmond, John A.	Snug Harbour	Oct. 7, 1902	350	00
Sommers, Napoleon	Midland Range Lights	June 19, 1900	150	00
Shannon, William	Grosse Point or Valleyfield	Sept. 27, 1866	425	00
Shannon, George	" "	" 27, 1866	175	00
Seguin, Grégoire	L'Orignal	May 8, 1894	100	00
Shaw, Thos. K.	Point Edward Ranges	Aug. 29, 1903	150	00
Smithers, R. O.	Mohawk Island	Mar. 31, 1896	400	00
Sutherland, Jno.	Port Burwell	June 18, 1894	225	00
Schofield, Fergus	Port Maitland	April 10, 1871	350	00

\* Allowance \$200,      † Per month while light in operation.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*ABOVE MONTREAL.—*Concluded.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Simpson, Hedley V. . . . .	Brighton Range . . . . .	May 11, 1888 . . . . .	540 00
Smith, H. E. . . . .	Presqu'Isle, Main Light . . . . .	April 29, 1898 . . . . .	350 00
Sullivan, Silas . . . . .	Baskin Wharf . . . . .	Dec. 22, 1896 . . . . .	130 00
Sauvé, Honoré . . . . .	Caron Point . . . . .	Feb. 16, 1889 . . . . .	60 00
Stoneburner, John A. . . . .	Cornwall Canal, upper entrance. . . . .	April 12, 1890 . . . . .	100 00
Spencer, C. R. . . . .	Scotch Bonnet . . . . .	April 27, 1903 . . . . .	350 00
Scott, Guy J. . . . .	Point Peter, Light and Fog Alarm . . . . .	June 6, 1901 . . . . .	650 00
Scott, Wm. J. . . . .	Corunna, Range Lights . . . . .	April 23, 1901 . . . . .	120 00
Stocker, Jos. L. . . . .	Ste. Anne de Bellevue . . . . .	May 20, 1902 . . . . .	150 00
Sweeney, Thomas . . . . .	Tomahawk Island . . . . .	Sept. 19, 1902 . . . . .	150 00
Taylor, Edward . . . . .	Parry Sound, Range Lights . . . . .	June 3, 1901 . . . . .	350 00
Tebo, Joseph . . . . .	North Sister Rock . . . . .	May 20, 1902 . . . . .	350 00
Veech, Stannes . . . . .	Nine Mile Point: light-keeper and engineer of fog alarm . . . . .	Mar. 7, 1894 . . . . .	*450 00
Valée, Charles . . . . .	Hope Island . . . . .	April 20, 1899 . . . . .	450 00
Vorce, Marcellus . . . . .	South Bay Point . . . . .	Dec. 22, 1902 . . . . .	200 00
Wallace, John G. . . . .	Lindoe Island . . . . .	July 1, 1881 . . . . .	250 00
Winthrop, Robert W. . . . .	Britannia . . . . .	April 13, 1891 . . . . .	100 00
Wootten, Edward . . . . .	Niagara, Fog Bell . . . . .	July 11, 1887 . . . . .	50 00
Webster, Chas. . . . .	Cabot Head, Light and Fog Alarm . . . . .	May 10, 1898 . . . . .	650 00
Whitmarsh, John . . . . .	Snake Island . . . . .	July 18, 1900 . . . . .	350 00
Weir, John C. . . . .	Belleville . . . . .	April 4, 1901 . . . . .	200 00
Wemp, Daniel . . . . .	Centre Brother Island . . . . .	Jan. 9, 1901 . . . . .	200 00

## BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC.

Abel, Philias . . . . .	Barre à Boulard, Back Range . . . . .	June 23, 1903 . . . . .	75 00
Arcand, Elzéar . . . . .	Cap de la Madeleine . . . . .	May 17, 1892 . . . . .	80 00
Arcand, Alfred . . . . .	Seven Island . . . . .	" 20, 1898 . . . . .	650 00
Ascah, James . . . . .	Fame Point, Gaspé Co. . . . .	Sept. 2, 1880 . . . . .	700 00
Arseneau, Nectaire . . . . .	Etang du Nord . . . . .	July 21, 1891 . . . . .	350 00
Bertrand, Louis . . . . .	Champlain Pole Light . . . . .	Sept. 12, 1902 . . . . .	60 00
Beaudet, Mrs. Laurent . . . . .	Lotbinière Front Light . . . . .	" 3, 1903 . . . . .	80 00
Beaudet, George . . . . .	Lotbinière Back Light . . . . .	Jan. 4, 1883 . . . . .	80 00
Beaudet, Charles . . . . .	Platon . . . . .	Aug. 24, 1894 . . . . .	†120 00
Bourque, Peter . . . . .	Bird Rocks . . . . .	Nov. 27, 1896 . . . . .	1,300 00
Bouilliane, Pierre . . . . .	Lark Islet Light and Fog Alarm . . . . .	Sept. 1, 1872 . . . . .	200 00
Bertrand, Auguste . . . . .	Macquereau Point . . . . .	Dec. 21, 1877 . . . . .	300 00
Banville, Joseph . . . . .	Matane . . . . .	Feb. 1, 1897 . . . . .	300 00
Bourget, F. . . . .	Percé . . . . .	Mar. 18, 1893 . . . . .	200 00
Breton, Narcisse . . . . .	Point Rich . . . . .	May 16, 1896 . . . . .	500 00
Bourget, Charles . . . . .	Cape Despair . . . . .	Nov. 1, 1897 . . . . .	‡400 00
Bisson, Wm. . . . .	Grand River . . . . .	Oct. 22, 1896 . . . . .	‡150 00
Bouchard, Louis . . . . .	Cap au Saumon, Lighthouse and Fog Alarm . . . . .	May 16, 1896 . . . . .	600 00
Boucher, Louis . . . . .	Isle aux Raisins . . . . .	April 13, 1898 . . . . .	240 00
Boulanger, H. . . . .	St. Thomas Wharf . . . . .	" 4, 1898 . . . . .	80 00
Bujold, Louis . . . . .	Carleton Point . . . . .	May 25, 1899 . . . . .	300 00
Boisvert, Alcide . . . . .	Cape Charles . . . . .	July 23, 1901 . . . . .	150 00
Baron, Amédée . . . . .	Cap Charles . . . . .	June 26, 1901 . . . . .	70 00
Bouchard, Geo. . . . .	St. Irénée . . . . .	Aug. 31, 1901 . . . . .	40 00
Bousquet, Félix . . . . .	Verchères Village (Back) . . . . .	April 21, 1902 . . . . .	70 00
Bilodeau, Joseph O. . . . .	Bellechasse . . . . .	June 15, 1903 . . . . .	320 00
Bergeron, Nap. . . . .	St. Antoine, Lotbinière Front Light . . . . .	Mar. 21, 1902 . . . . .	80 00
Bordua, Philéas . . . . .	Ile Deslauriers . . . . .	April 21, 1902 . . . . .	120 00
Bourdages, Pitre . . . . .	Point Eschourie . . . . .	July 25, 1903 . . . . .	60 00
Carignan, P. L. . . . .	Champlain Main Light . . . . .	Oct. 1, 1902 . . . . .	80 00

\* Allowance \$200. † Has also charge of Back Rock Range Light at \$5 per month. ‡ Allowance \$30 for fuel and \$20 for blowing fog horn.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—Continued.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Cormier, Wm.....	Amherst Island.....	April 26, 1871..	*300	00
Colton, P. J.....	Belleisle.....	" 1, 1882..	1,100	00
Côté, Luc.....	Cape Chatte.....	Dec. 3, 1901..	†300	00
Campbell, John W.....	Cape Norman, Lighthouse and Fog Alarm. ....	April 12, 1890	720	00
Costin, Eugène.....	Cape Rosier.....	Nov. 4, 1890..	800	00
Chamberlain, H.....	Oak Point, Range Lights..	April 19, 1900..	100	00
Collins, Geo. F.....	Entry Island ..	Feb. 28, 1901..	250	00
Chenele, John A.....	Grand Entry, Mag. Island.....	July 4, 1901..	50	00
Chabot, Edouard.....	Point St. Laurent.....	Aug. 1, 1880..	300	00
Chiasson, Edward.....	Etang du Nord.....	Oct. 22, 1896..	350	00
Croteau, Téléphore .....	Ste. Croix, Front Range.....	Mar. 28, 1901..	70	00
Chicoine, Alphonse.....	Isle Bouchard. Back Light.....	April 23, 1902..	80	00
Chicoine, F. Xav.....	Verchères Traverse (front).....	April 21, 1902..	80	00
Charbonneau, Philéas.....	" " (back).....	" 21, 1902..	70	00
Charest, Xavier.....	Flower Island.....	Oct. 10, 1903..	600	00
Courtois, Joseph.....	Isle Ste. Thérèse.....	Feb. 11, 1903..	80	00
Carrière, H.....	Isle St. Joseph, Boucherville.....	Aug. 25, 1903..	80	00
Desmarais, Philéas.....	River St. Francis.....	July 2, 1897..	\$20	00
Duperie, Alfred J.....	Pointe aux Jones .....	May —, 1873..	40	00
Demers, Alphonse.....	Pointe à Basil.....	Feb. 6, 1901..	100	00
Danville, Elzéar.....	" .....	" 6, 1901..	100	00
Doré, François.....	St. Antoine, Lotbinière Back Lights ..	Mar. 21, 1902..	120	00
Dubois, Louis.....	Isle à la Bague.....	April 14, 1903..	150	00
Dubois, Octave.....	Greenly Island.....	Oct. 12, 1903..	800	00
Electric Light Company	Roberval Beacon Light (2).....	June 21, 1898..	60	00
Fournier, Alfred.....	Upper Traverse.....	April 14, 1900..	600	00
Fugère, Léandre.....	Batiscan Front Light.....	" 19, 1868..	80	00
Fugère, Napoléon.....	" Back .....	Jan. 10, 1887..	80	00
Fiset, Jean H. ....	Lake St. Peter Light-ship No. 2.....	April 22, 1875..	500	00
Fontaine, Edouard .....	Cape Bauld Lighthouse and Fog Alarm. ....	Nov. 1, 1892..	800	00
Faffard, Victor.....	Pointe de Monts.....	Aug. 1, 1889..	‡400	00
Fraser, Pierre T.....	Red Island ..	April 12, 1890..	*450	00
Ferland, Nap.....	Ste. Petronille.....	Sept. 3, 1901..	150	00
Filteau, E. Eugène.....	Father Point.....	1903..	600	00
Gervais, Ovila .....	Contrecoeur (1) .....	Mar. 1, 1877..	100	00
Geoffrion, Azarie.....	Pointe aux Trembles, Varennes.....	May 1, 1903..	70	00
Giguère, Denis.....	Lavaltrie .....	April 24, 1870..	300	00
Gauthier, Francis.....	Poste St. Martin. ....	April —, 1872..	40	00
Grenier, Solomon.....	Newport .....	June 3, 1897..	150	00
Guyon, Joseph.....	Verchères Village (front).....	April 21, 1902..	80	00
Gilbert, F. E.....	Rivière du Loup (wharf) ..	Sept. 22, 1902..	70	00
Gagné, François .....	L'Ange Gardien Front Light, Island Orleans ..	Nov. 10, 1902..	70	00
Granier, Henry .....	Bersimis Range. ....	Aug. 8, 1903..	100	00
Goudreault, Wm.....	Isle au Belier, Lake St. John.....	Oct. 30, 1901..	75	00
Girard, Henry, dit.....	Murray Bay.....	July 13, 1903..	50	00
Hébert, Moise Manuel ..	Cap de la Madeleine.....	May 11, 1888..	80	00
Harvey, André.....	Chicoutimi Wharf.....	" 30, 1889..	40	00
Irvine, John T. A. ....	Red Island Light-ship.....	Mar. 2, 1900..	500	00
Kennedy, Thomas.....	Gaspé Light-ship.....	1871..	500	00
Katlèche, Désiré.....	Lake St. Peter Light-ship No. 1.....	April 12, 1887..	450	00
Lachapelle, Jean B.....	Repentigny Front Light....	Feb. 1, 1861..	75	00
Langlois, Antoine.....	River du Chêne.....	July 11, 1888..	100	00
Laliberté, Arthur.....	Ste. Emelie, Front Range .....	Sept. 24, 1880..	70	00
Lebel, Esdras.....	Lower Traverse Light-ship.....	April 21, 1900..	2,300	00
Lambert, Louis.....	Lake St. Peter Lightship No. 3. ....	June 15, 1903..	400	00

\* Has allowance of \$50 for fuel, &c. † Allowance \$200 for assistant; \$25 for hauling supplies and water during season of navigation, and \$10 for fuel. ‡ \$200 for attending signal gun, &c. § Per month. Allowance, \$1,900.



SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*  
BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Lord, Joseph.	North of Halfway Point.	May 5, 1903.	170 00
Laporte, Ivon.	Isle Marie, Isle Bouchard.	April 21, 1902.	120 00
Lapointe, F. X.	Isle à l'Aigle, Front Range.	May 1, 1903.	100 00
Leclerc, P. M.	Ste. Emelie, Back Range.	April 8, 1899.	80 00
Lavoi, M.	Rivière Valin Range.	—, 1893.	70 00
LeHuguet, François.	Gaspé Cape.	Oct. 22, 1896.	650 00
Lindsay, Wm.	Gaspé Wharf.	June 14, 1900.	42 00
Lindsay, Irénée.	Green Island.	Sept. 25, 1888.	650 00
Loisel, John.	Paspébiac.	Aug. 27, 1894.	150 00
LeBlanc, Régis.	White Island Reef Light-ship.	Jan. 11, 1878.	*500 00
Lemieux, Z.	South-west Point, Anticosti.	July 10, 1900.	600 00
Lachance, Louis.	St. Johns, Island of Orleans.	Sept. 26, 1896.	300 00
Leclerc, Geo.	Pillars—Algernon Rock.	July 30, 1901.	650 00
Lavoie, F.	Anse St. Jean Wharf.	Mar. 13, 1889.	40 00
Levesque, Arthur.	Kamouraska.	Feb. 19, 1901.	400 00
Leclerc, Auguste.	Martin River.	Sept. 3, 1902.	300 00
Lemieux, F. X.	Barachois de Malbaie.	Mar. 6, 1903.	50 00
Levesque, Dom.	Pointe aux Origneaux.	Oct. 5, 1903.	350 00
Lepage, Joseph.	St. Francis, Island of Orleans.	April 20, 1876.	75 00
Manseau, François.	Port St. Francis.	Mar. 27, 1900.	†30 00
Montplaisir, Antoine B.	Cap de la Madeleine.	Aug. 6, 1877.	175 00
Malo, Joseph.	Isle Ste. Thérèse, Lower Range.	Feb. 1, 1897.	130 00
Marchand, Ferdinand.	Point aux Citrouilles.	April 27, 1896.	200 00
Martin, Paul.	St. Valentine.	" 28, 1873.	150 00
Molson, Mrs. Alexander.	Molson's Island, Lake Memphremagog.	From year to year.	‡2 50
Maloun, Alfred.	Anticosti, West Point.	July 1, 1877.	\$450 00
Martin, Jules G.	Little Metis.	Dec. 23, 1879.	300 00
Marceau, Louis.	St. Francis, Island of Orleans.	April 1, 1884.	75 00
Mayrand, Eugène.	Grondines, Front Light.	" 28, 1901.	100 00
Morin, Hypolite.	Pilgrims.	April 29, 1898.	340 00
Marcotte, Mrs. P. L.	Point Bleue, Lake St. John.	Nov. 28, 1898.	40 00
Morin, Alex.	Rivière à la Pipe.	Oct. 3, 1901.	50 00
McGee, Jas. A.	Ash and Bloody Island.	May 26, 1903.	200 00
McWilliams, John J.	Father Point.	June 1, 1876.	200 00
McLaren, Donald.	River du Moulin.	Sept. 19, 1889.	45 00
McInnis, George.	Port Daniel.	Oct. 7, 1902.	60 00
Noel, Edouard.	Barre à Boulard, Richelieu Island.	April 10, 1899.	150 00
Paré, Olivier.	L'Ange Gardien, Back Light, Island of Orleans.	Nov. 10, 1902.	70 00
Pelletier, Tancrede.	Egg Island.	July 1, 1901.	500 00
Paquin, Sylva.	Point du Lac.	May 2, 1900.	100 00
Paul, Edouard.	Isle de Grace.	Sept. 7, 1871.	**30 00
Pagé, Celestin.	L'Islet Richelieu.	Jan. 9, 1895.	150 00
Peters, D. E.	Witch Rock, Lake Memphremagog.	Oct. 31, 1901.	‡4 00
Peters, J. H.	Green Point.	From year to year.	‡1 50
Patterson, J. C.	Wadleigh.	"	‡1 50
Painchaud, Joseph.	Crane Island.	July, 1861.	320 00
Paquet, Pierre.	Ste. Famille, Back Light, Island of Orleans.	Oct. 19, 1885.	70 00
Pednault, Pierre.	Isle aux Coudres Pole Light.	April 6, 1896.	40 00
Poulin, Alfred.	Ste. Famille, Front Light, Island of Orleans.	" 26, 1898.	70 00
Pineault, Louis.	Bicquet Lighthouse and Fog Alarm.	Oct. 6, 1900.	700 00
Perrault, Henri.	St. Pierre les Becquets.	May 26, 1901.	70 00
Pilote, Auguste.	Poste St. Martin, Back Light.		40 00
Reeves, Samuel.	Isle Ste. Thérèse, Upper Range.	Oct. 12, 1870.	270 00
Rivet, Léon L.	Repentigny, Back Light.	April 28, 1894.	75 00
Richard, Alphonse.	Brandy Pots.	Oct. 7, 1878.	400 00
Rennie, E. H.	Cape Ray Lighthouse and Fog Whistle.	" 19, 1884.	800 00
Roberge, C. Honoré.	St. Pierre, Back Light, Island of Orleans.	" 19, 1885.	70 00
Rodrique, Josephine.	Portneuf.	May 16, 1903.	250 00

\* Allowance, \$2,300.      † A month during season of navigation.      ‡ Per week.      § Allowance  
\$300 for assistance.      Allowance, \$20 for fuel and \$20 for horse.      \*\* Per month during season of  
navigation.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Racette, Widow Wm. D.	Ste. Croix Back Range Lights.	Dec. 10, 1900..	70 00
St. Onge, Thomas	Contrecoeur	June 14, 1886..	75 00
Salvail, Omer	Isle à la Pierre	May 6, 1897..	220 00
Savaria, Eusébe	Isle à l'Aigle, Back Range Light.	" 1, 1903..	100 00
Savard, Dorilas	Savard, Valin Range.		70 00
Simard, Edward	Montée du Lac, and Cape Rouge Beacons.	Oct. 28, 1870..	400 00
Sasseville, F. J.	Cape Magdalen, Lighthouse and Fog Whistle.	June 9, 1886..	700 00
Ste. Croix, George	Plateau Rock	Oct. 22, 1896..	400 00
Savard, Jno	River Caribou Front Light.		40 00
Simard, H.	" Back Light.		40 00
Trottier, Widow I.	Grondines Back Light.	Aug. 1, 1872..	100 00
Thurber, Mrs. Wm.	Ste. Croix	March 28, 1901..	175 00
Tremblay, W. T.	Goose Cape	April 4, 1888..	250 00
Tremblay, Edmond	Portneuf en bas.	May 16, 1903..	300 00
Tremblay, George	River du Moulin	Sept. 9, 1889..	40 00
Tremblay, Pitre	St. Alphonse Wharf	June 19, 1895..	40 00
Tremblay, Henry	Cap à l'Aigle Pole Light.	Feb. 6, 1896..	40 00
Tremblay, Thomas	Bay St. Paul	Oct. 25, 1898..	250 00
Tremblay, Alexis	Heath or East Point, Anticosti.	July 25, 1900..	600 00
Tremblay, Magloire	Les Eloulements Wharf Light.	April 27, 1892..	40 00
Vigneau Placide	Perroquet Island.	Sept. 19, 1892..	600 00
Vézina, Oliver	St. Pierre Front Light, Island Orleans.	Oct. 28, 1897..	70 00
Whitman, Robert H.	Lacolle	May 14, 1883..	150 00
Wheeler, W.	Lead Mines, Lake Memphremagog	From year to year	*1 50
Wyatt, Thomas M.	Forteau Lighthouse and Fog Whistle.	Oct. 18, 1889..	†800 00
Willett, B. V.	Duthia's Point, New Richmond	" 16, 1903..	60 00

NEW BRUNSWICK.

Arseneau, James.	Dalhousie	Jan. 18, 1894..	100 00
Archer, Wm	North Tracadie	Nov. 7, 1872..	275 00
Allain, Joseph	Hay Island Beacon Light.	May 21, 1895..	150 00
Balmer, Matthew	Oak Point	April 27, 1900..	80 00
Barbour, Jas. G.	Cape Enrage Lighthouse and Fog Signal.	May 11, 1888	800 00
Bent, A. J. Percy	Jourimain	Jan. 25, 1901..	300 00
Blacklock, Fred. G.	Cape Spencer	Mar. 5, 1888..	400 00
Brown, Charles	Quaco West Head Light.	Nov. 25, 1884	400 00
Bradshaw, L. B.	Quaco West Head Fog Alarm.	Sept. 3, 1887..	400 00
Brune, John David	Goose Lake	May 11, 1888..	†250 00
Boudreau, Jos. B.	Petit Rocher	Feb. 26, 1896..	150 00
Blakley, Lawrence	Harper Point	Sept. 9, 1887..	75 00
Bellmore, Fredk	Dipper Harbour	Mar. 12, 1895..	100 00
Belliveau, Samuel Philip	Fort Folly Point	April 8, 1903..	175 00
Brennan, Robert	Oromocto	Mar. 18, 1903	80 00
Cochran, Fredk. M.	Quaco Pier Light.	Mar. 25, 1892..	100 00
Conley, John C.	Drews Head.	April 2, 1892..	250 00
Cummings, Geo.	Campbellton Range Lights.	Jan. 1, 1880..	100 00
Chapman, James	Baie du Vin Island Range Lights.	July 24, 1882..	200 00
Crandall, D. H.	Grays Point Pole Light.	April 13, 1900..	70 00
Carney, John	Perry Point.	Sept. 25, 1900..	80 00
Copp, A. B.	Anderson Hollow.	Mar. 30, 1903..	100 00
Cormier, Jadus P.	Buctouche Bar.	July 26, 1902..	200 00
Corey, Chas. A.	Head Harbour Fog Alarm	June 15, 1903..	500 00
Chaffey, Harry V.	Cherry Island Fog Bell.	Aug. 7, 1903..	50 00
Dickson, Elias C.	Pea Point.	Nov. 16, 1898..	†250 00

\* Per week.

† Allowance, \$12.

‡ Allowance, \$20.



## SESSIONAL PAPER No. 21

STATEMENT giving the Names and Stations of Light-keepers, &c.—*Continued.*NEW BRUNSWICK.—*Continued.*

Name.	Station.	Appointed.	Salary.
			S cts.
Delaney, John.....	Grant Beach.....	Oct. 7, 1880..	125 00
Drake, Jeremiah.....	St. John Signal Station.....	Mar. 24, 1881..	750 00
Dalzell, Geo. Y.....	Swallow Tail.....	" 18, 1893..	100 00
Dinsmore, Samuel G.....	Big Duck Island Fog Alarm.....	July 5, 1886..	550 00
DeGrace, John.....	Indian Point.....	June 4, 1889..	150 00
Day, W. A.....	Belyea Point.....	Sept. 20, 1899..	90 00
Daigle, U. D.....	Black Lands Gully.....	July 13, 1903..	100 00
Daigle, Victor.....	Pointe Sapin.....	May 28, 1903..	15 00
Doucett, Fred. F.....	Caraquet Front Range Light.....	Oct. 14, 1903..	50 00
Egan, Edward.....	Belloni Point.....	May 17, 1892..	100 00
Frankland, Louis.....	Gull Cove.....	Nov. 14, 1902..	
Frawley, Frank.....	Lepreau Fog Alarm.....	June 15, 1898..	450 00
Flewelling, M.....	Flewelling Landing.....	April 12, 1890..	80 00
Fanjoy, William.....	Fanjoy Point.....	Dec. 15, 1897..	80 00
Ferguson, W. G.....	South Tracadie Gully.....	Mar. 23, 1898..	150 00
Guptill, S. N.....	Grand Harbour.....	Oct. 24, 1900..	400 00
Gillard, John.....	Shediac.....	June 13, 1888..	40 00
Gould, Francis T.....	Shediac.....	Jan. 13, 1889..	40 00
Gregg, Wilson.....	St. John Harbour Beacon.....	April 3, 1900..	350 00
Hendry, A. M.....	Hendry Farm.....	April 28, 1899..	80 00
Hayden, Michael.....	Pokemouche.....	Oct. 17, 1888..	200 00
Henderson, Arthur.....	Midjie Bluff.....	" 4, 1894..	200 00
Hamm, Chas. P.....	Musquash.....	Jan. 14, 1879..	*300 00
Helms, Geo.....	Letite Passage Light and Fog Whistle.....	May 5, 1882..	†580 00
Hachey, Octave.....	Pokesudie Island.....	July 12, 1881..	180 00
Harvey, W. L.....	Gannet Rock.....	May 20, 1898..	700 00
Hannah, Mrs. B.....	Spruce Point.....	Sept. 15, 1892..	120 00
Ingalls, Turner.....	Southwest Head, Grand Manan.....	Dec. 4, 1900..	500 00
Ingersoll, Colin J.....	Machais, Seal Isd. Lights and Fog Alarm.....	" 30, 1901..	1,000 00
Kilpatrick, Joseph.....	St. Andrews.....	Feb. 3, 1898..	350 00
Lantaigne, Gervais.....	Caraquet Island.....	June 16, 1888..	200 00
Leblanc, Charles P.....	Cassie Point.....	May 4, 1872..	250 00
Looney, Thos. E.....	Greenhead, St. John River.....	Oct. 14, 1886..	200 00
Lord, Lindwood.....	Southwest Wolf Island.....	April 23, 1903..	500 00
Lockhart, Edwin.....	Ward Point.....	Oct. 20, 1903..	80 00
Legère, P. L.....	Caraquet Back Range Light.....	Sept. 24, 1903..	50 00
Mills, George.....	Swashway Range Lower.....	June 23, 1897..	200 00
Morrison, Peter.....	Oak Point.....	July 24, 1882..	100 00
Morrison, Peter, jr.....	Portage Island.....	May 17, 1892..	300 00
Morrison, Duncan.....	Sheldrake Island, Lights.....	Feb. 25, 1880..	300 00
Maillet, D. O.....	Buctouche Inner Range.....	July 7, 1883..	150 00
Matheson, R. B.....	Newcastle.....	April 18, 1898..	100 00
Murray, Michael.....	Middle Island.....	" 10, 1902..	200 00
Maloney, Wm.....	Point Marks.....	Nov. 7, 1903..	120 00
McLeod, J. H.....	Bliss Island.....	Oct. 17, 1900..	300 00
McLennan, Kenneth.....	Escuminac Lighthouse and Fog Alarm.....	Mar. 7, 1892..	750 00
McIntosh, Chas.....	Neguac Wharf Lights.....	Dec. 19, 1892..	100 00
McBaine, Alex.....	Cox Lower Point.....	May 6, 1898..	80 00
Macdonald, R. P.....	Musquash Island.....	Jan. 28, 1901..	80 00
McMann, Robert Harvey.....	McMann Point.....	Nov. 2, 1901..	80 00
McNeil, Henry H.....	Dalhousie Beacon Lights and Douglas Island Light.....	Jan. 1, 1880..	180 00
McConnell, Robert.....	Miscou Gully.....	Sept. 9, 1887..	100 00
McLean, R.....	Miramichi Bay Lt. Ship.....	April 12, 1902..	‡400 00
Newman, Simon W.....	Head Harbour Light.....	June 15, 1903..	300 00

\* Allowance, \$45.

† Allowance, \$50.

‡ Allowance, \$300.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
NEW BRUNSWICK—Concluded.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Nevers, George F.	Jemseg	Nov. 24, 1884	80 00
Purvis, jr.	Gagetown	Aug. 8, 1903	80 00
Preston, S.	Preston Beach Lights	July 11, 1889	125 00
Pendlebury, Wm. J.	St. Andrews	April 10, 1889	250 00
Pickett, Robert E.	Palmer's Landing Wharf Light	May 11, 1897	80 00
Parker, Alvin	Mulholland Point	June 13, 1901	200 00
Palmer, E. B.	Hampstead Wharf	Nov. 6, 1900	80 00
Russell, James R.	Grindstone Island Light and Fog Alarm	Jan. 13, 1899	700 00
Robichaud, Joseph L.	Miscou Light-house and Fog Whistle	Nov. 11, 1902	800 00
Robinson, John	Neguac Main Light	June 30, 1896	150 00
Richard, Peter F.	Richibuctou Head	May 30, 1895	185 00
Robertson, Charles M.	Robertson Point	June 30, 1897	80 00
Robertson, Meier	Shediac Island Range	Dec. 29, 1873	250 00
Ross, Elijah	Negro Point	Mar. 5, 1878	400 00
Robichaud, Jude	Richibuctou Inner Range	June 16, 1902	225 00
Robichaud, Henri B.	Little Buctouche Range	June 1, 1884	150 00
Roherty, A.	Belledune	Feb. 5, 1895	100 00
Richards, D. L.	Partridge Isd. Lighthouse and Fog Whistle	July 19, 1900	800 00
Robertson, J. A. D.	Heron Island	April 1, 1902	200 00
Robichaud, Aug.	Shippegan	June 11, 1902	280 00
Richard, Jos F.	Richibuctou Bar Outer Range	" 16, 1902	150 00
Sutherland, Geo. C.	Bathurst Harbour Range	Mar. 20, 1882	*200 00
Scott, Chas. F.	Stonehaven	July 20, 1885	100 00
Spragg, T. W.	Hatfield Point Range	June 27, 1903	...
Thomas, Geo. H.	Lepreau Light	Aug. 29, 1884	400 00
Tatton, Geo. T.	Long Eddy Point Fog Whistle	Oct. 16, 1886	550 00
True, John Howard	Wilmot Bluff	Sept. 12, 1899	80 00
Upton, Robert	Bridge Point	" 11, 1899	80 00
Williston, Seymour	Swashway Range Upper Lt.	June 4, 1902	300 00
Wagner, Richard	Sand Point	June 7, 1883	80 00
Williams, Forrest W.	William Landing	May 11, 1897	80 00

NOVA SCOTIA.

Amero, Chas. A.	Whitehead Island	Nov. 9, 1897	350 00
Amero, Geo. D.	Pubnico	Feb. 6, 1893	240 00
Amirault, James	Sissiboo	July 11, 1899	200 00
Beaman, Edwin	Digby Pier	May 29, 1897	100 00
Bonner, John Charles	Point Aconi	Nov. 6, 1903	200 00
Burgess, Watson	Port l'Hébert	July 26, 1892	150 00
Boutillier, R. J., supt	Sable Island Humane Est.	Nov. 13, 1884	†700 00
Boutillier, Henry	Indian Harbour, Paddy's Head	June 6, 1901	100 00
Bollong, James	Pope Harbour	Aug. 6, 1877	300 00
Bourgeois, Philip	Cheticamp Range Lights	May 23, 1898	150 00
Boudrot, Thomas	Poulamon, Hawk Islet	June 19, 1901	250 00
Baker, Thomas	Peases Island	May 19, 1879	350 00
Brackett, Wm.	Herring Cove	Aug. 28, 1897	100 00
Belliveau, John H.	Belliveau Cove	Feb. 16, 1889	80 00
Brownell, Luther	Cold Spring Head	Mar. 27, 1901	120 00
Brown, James	Cranberry Head Fog Alarm	June 22, 1898	500 00
Buchanan, Angus A.	Neil Harbour	Aug. 14, 1899	150 00
Buckman, Chas.	Grand Passage	Jan. 7, 1901	200 00
Boudreau, W. C.	Port Felix	July 16, 1902	250 00
Burke, Henry	Country Harbour, Green Island	June 11, 1902	400 00
Burke, Marin	Rivière Bourgeoise	Dec. 1, 1902	60 00

\* Allowance, \$10.     † With board for self and family and assistants and allowance for salaries of staff.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*NOVA SCOTIA—*Continued.*

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Burns, Ronald H.....	Wedge Island.....	April 18, 1903..	400	00
Burgess, Lewis E.....	Walton Harbour.....	July, 13, 1903..	150	00
Chiasson, Germain.....	Caveau Point Range Lights.....	Aug. 20, 1897..	120	00
Chiasson, Joseph P.....	Grand Etang, Inverness.....	May 21, 1901..	60	00
Crichton, H. H.....	Creighton Head.....	" 6, 1874..	200	00
Connington, Thomas.....	Louisburg Range Lights.....	Oct. 26, 1897..	150	00
Crowell, John.....	Seal Island Lighthouse and Fog Whistle.....	" 14, 1899..	800	00
Campbell, Samuel C., supt.	St. Paul's Island Humane Est.....	July 17, 1897..	*700	00
Campbell, John M., engineer	Fog Alarm, St. Paul's Island.....	Oct. 26, 1898..	500	00
Campbell, J. O.....	Port Mouton.....	April 29, 1898..	300	00
Comeau, Louis C.....	Meteghan River Wharf.....	Oct. 12, 1875..	100	00
Campbell, John P.....	Red Islands, C. B.....	Nov. 30, 1901..	120	00
Croucher, George A.....	Croucher Island.....	Jan. 31, 1883..	300	00
Clough, Daniel.....	Grand Dique Pole Light.....	July 4, 1884..	70	00
Clory, Abraham.....	Glasgow Point.....	" 25, 1894..	150	00
Coolen, Albert S.....	Hubbard Cove.....	Oct. 31, 1903..	250	00
Cameron, L. G.....	Beaver Harbour.....	Feb. 15, 1902..	150	00
Christian, John.....	Betty Island.....	Dec. 12, 1899..	500	00
Creelman, Samuel.....	Port au Pique.....	May 2, 1901..	25	00
Campbell, D. A., engineer..	Louisburg Fog Alarm.....	Mar. 20, 1902..	500	00
Cunningham, A. H.....	Cape Sable Light and Fog Alarm.....	July 16, 1902..	800	00
Cohon, Havelock.....	Cranberry Island Light and Fog Alarm.....	Sept. 7, 1903..	800	00
Doody, James.....	McNab Island.....	July 8, 1903..	300	00
Dunn, James M.....	Fort Williams.....	Oct. 26, 1859..	260	00
Doane, John H.....	Yarmouth or Cape Fourchu L. H. & F. W.....	July 1, 1874..	800	00
Doane, Joshua.....	Yarmouth Harbour.....	Feb. 23, 1874..	†350	00
Doyle, Edward.....	Mabou Front Range Light.....	June 14, 1897..	70	00
D'Entremont, W. H.....	Abbot Harbour.....	May 22, 1888..	90	00
Dewis, F. H. P., engineer..	Cape d'Or Fog Whistle.....	April 13, 1898..	‡500	00
Dunn, Wm. A.....	Green Island, Richmond.....	May 20, 1902..	500	00
Dunn, Miles A.....	Margaree Harbour, Outer Range Light.....	" 12, 1903..	50	00
Ellis, Wm. E.....	Point Prim or Digby Gut L. H. & F. W.....	Mar. 8, 1875..	800	00
Early, John.....	Margaretsville.....	Feb. 19, 1887..	230	00
Fraser, Alexr.....	Great Bras d'Or, South-west Range.....	Jan. 13, 1903..	100	00
Fowler, Ernest E.....	Apple River Lighthouse and Fog Whistle..	Oct. 9, 1902..	700	00
Fisher, Joel W.....	Baccaro or Barrington.....	Aug. 8, 1893..	400	00
Fulker, Wm. G.....	Devil's Island.....	May 3, 1886..	420	00
Firth, Charles M.....	Coffin Island, Liverpool.....	June 30, 1880..	400	00
Foster, Israel C.....	Port Medway.....	Oct. 13, 1892..	260	00
Foster, Samuel T.....	Port Medway Breakwater.....	Feb. 17, 1899..	100	00
Foster, Geo. M.....	Port George.....	Nov. 5, 1897..	100	00
Fraser, John A.....	Dover.....	Dec. 31, 1892..	200	00
Faulkner, W. Y.....	Burnt Coat.....	June 22, 1898..	250	00
Findlay, John H.....	Bull Point, Sambro Harbour.....	Dec. 7, 1899..	100	00
Franklin, J. L.....	Wolfville, N.S.....	April 4, 1902..	100	00
Falconer, David.....	Cariboo Island.....	Dec. 20, 1902..	300	00
Gilkie, Henry A.....	Sambro.....	Jan. 8, 1877..	800	00
Giffin, Ira L.....	Holly Point Isaac Harbour.....	April 28, 1894..	200	00
Gardner, Frederick T.....	Brooklyn Pier.....	Feb. 6, 1889..	100	00
Gallant, Patrick.....	Little Loraine.....	Jan. 19, 1900..	80	00
Goodwin, Jas. E.....	Wood Harbour.....	Aug. 27, 1900..	200	00
Garrison, S. H.....	Peggy Point.....	Dec. 22, 1902..	350	00
Gray, Peter Angus.....	Pennant Harbour.....	June 30, 1903..	100	00
Harpell, Jeremiah.....	Jeddore Harbour Range Lights.....	Jan. 21, 1901..	200	00
Hopkins, Leslie.....	Bon Portage Island.....	Oct. 20, 1897..	350	00
Huntley, Charles H.....	Kingsport.....	June 30, 1890..	100	00
Hawley, Mathew.....	South Bay, Ingonish.....	May 13, 1897..	140	00
Hardy, John.....	Gabarus.....	Nov. 22, 1890..	200	00
Hardy, Joseph W.....	Guion Island.....	Jan. 30, 1903..	400	00

\* Allowance, \$1,400 for assistants and board for self and family and assistants.

† Allowance, \$30 per annum for fog bell. ‡ Allowance of \$300.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
NOVA SCOTIA—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Hennesey, W. P.	Highland Village Pole Light.	April 6, 1899.	25 00
Hinds, James.	Victoria Beach.	Mar. 7, 1901.	100 00
Hemlow, James S.	Liscomb.	Jan. 2, 1903.	300 00
Iceton, Wm.	Mauger Beach Light and Fog Alarm.	July 8, 1903.	800 00
Johnson, Edward.	Chebucto Head Lighthouse and Fog Whistle.	May 14, 1872.	800 00
Joyce, Simon.	Seal Island, Lennox Passage.	July 4, 1884.	100 00
Jamieson, Chas.	Cape St. Lawrence.	Sept. 21, 1893.	400 00
Jameson, Geo. C.	Cole Harbour Range Lights.	Oct. 21, 1898.	150 00
Knowlan, Alfred.	Queensport.	Nov. 13, 1902.	300 00
Long, Joseph.	Canso Harbour.	Dec. 31, 1896.	270 00
Leblanc, Severin.	Fish Island.	July 1, 1889.	250 00
Lowden, David.	Pictou Harbour Range Lights.	" 12, 1897.	150 00
LeVashe, Wm.	Arichat.	Oct. 17, 1898.	250 00
Lyons, John H.	Barrington East Bay Light-ship.	June 18, 1897.	500 00
Landry, Edward.	Petit de Grat.	Feb. 23, 1897.	200 00
Larkin, Ephraim.	Stoddart Island.	Mar. 18, 1896.	200 00
Livingstone, George S.	Advocate Harbour.	May 8, 1884.	250 00
LeBlanc, Benjamin.	Candle Box Island.	Nov. 1, 1892.	300 00
Morrell, B. H.	Brier Island, Fog Whistle Engineer.	June 6, 1901.	400 00
Morrison, M. D.	Black Rock Point.	" 8, 1892.	250 00
Muise, Marcellin.	Cheticamp.	Nov. 27, 1896.	300 00
Misner, John E.	Fort Point.	May 16, 1896.	150 00
Moser, Samuel.	Moser Island.	Nov. 6, 1885.	350 00
Mullins, James.	Mullins Point.	June 8, 1892.	250 00
Munro, William.	Pictou.	Nov. 22, 1890.	460 00
Murphy, Michael.	Pomquet Island.	Dec. 18, 1890.	350 00
Mundell, Edward.	Eddy Point.	July 28, 1903.	400 00
Martell, John T.	Scatterie Lighthouse and Fog Whistle.	July 30, 1897.	800 00
Murray, John.	Cape George, Great Bras d'Or Lake.	Nov. 3, 1882.	200 00
Munroe, William L.	Three Top Island.	Oct. 28, 1879.	300 00
Mitchell, John W.	Jeddore Rock.	Sept. 29, 1882.	400 00
Mitchell, Wm. A.	Quaker Island.	Feb. 17, 1896.	300 00
Matheson, Murdoch.	Whycocomah Pole Light.	Sept. 11, 1884.	60 00
Morrison, Widow.	Freestone Islet Pole Light.	June 5, 1897.	150 00
Mauger, John J.	Cape LaRonde.	Nov. 16, 1898.	300 00
Myrick, John.	Cape Race, Newfoundland, L. H. & F. W.	Nov. 1, 1897.	1,000 00
McDonald, Robert.	Carter Island.	Jan. — 1885.	275 00
McRae, Roderick.	Margaree or Sea Wolf Island.	Feb. 3, 1898.	400 00
McLellan, Rod'k.	Margaree Harbour, Inner Range.	June 8, 1901.	50 00
McKay, R.	North Canso.	Feb. 4, 1882.	350 00
McFarlane, Andrew.	Pictou Island.	June 8, 1892.	400 00
McDonald, John A.	Port Hood.	May 10, 1880.	280 00
McDonald, James.	Point Tupper.	Mar. 15, 1870.	300 00
McAskell, Donald.	St. Ann Harbour.	June 26, 1889.	140 00
McLean, H.	Gillis Point.	Dec. 18, 1897.	150 00
McRae, Hector.	McKenzie Point, Great Bras d'Or.	Aug. 20, 1890.	160 00
McLeod, Norman.	Cape North, Money Point.	Oct. 14, 1899.	400 00
McKay, Angus.	Clarke Cove.	June 3, 1902.	50 00
McNeil, F. X. S.	Iona.	Nov. 16, 1901.	120 00
McRae, Donald.	Kidston Island.	May 17, 1892.	200 00
McLeod, Angus.	St. Esprit Island.	Oct. 27, 1880.	400 00
McDonald, Norman.	Strawberry Island Pole Light.	July 4, 1884.	100 00
McAskill, Kenneth.	Jerome Point.	" 30, 1901.	250 00
McNeil, John C.	Piper Cove.	Dec. 18, 1897.	120 00
McNeil, Laughlin.	McNeil Beach Pole Light.	Aug. 6, 1884.	60 00
McFadyen, Malcolm.	Mabou Back Range Light.	April 17, 1891.	50 00
McNeil, Daniel Y.	Campbell Island, Victoria Co.	July 30, 1903.	100 00
McEachern, A. L.	Cape St. George.	Sept. 8, 1898.	450 00
McLeod, Murdoch.	Pugwash.	Dec. 10, 1897.	250 00
McKenna, John L.	Cape Roseway, L. H. & F. W.	Mar. 31, 1899.	800 00
MacIntosh, James.	Egg Island.	July 28, 1899.	500 00



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*NOVA SCOTIA—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
McLellan, Ingersoll L.....	Economy Pole Light.....	May 16, 1899..	*6 00
McAdam, Hugh R.....	Arisaig.....	Nov. 14, 1898..	100 00
McKay, Hector.....	Bird Island.....	May 21, 1901..	450 00
McKenzie, Daniel.....	Flint Island.....	Nov. 19, 1903..	450 00
McLean, Malcolm.....	Great Bras d'Or, North-east Range.....	Jan. 13, 1902..	100 00
McLennan, John Angus.....	Henry Island.....	July 21, 1903..	405 00
Nass, Henry.....	Battery Point.....	Mar. 12, 1897..	300 00
Nickerson, Byron.....	Negro Island.....	July 26, 1897..	300 00
Nunn, George.....	Sydney Bar.....	June 20, 1872..	300 00
O'Leary, Wm. E.....	Beaver Island.....	Feb. 22, 1900..	350 00
O'Hara, Theodore.....	Port Bickerton.....	Jan. 26, 1901..	150 00
Orchard, L. D.....	Gull Rock.....	" 1, 1877..	400 00
Payzant, Jason.....	Little Hope Island.....	Oct. 22, 1901..	500 00
Pearl, Albert.....	Green Island off Margaret's Bay.....	Dec. 29, 1873..	500 00
Price, Philip.....	Louisburg.....	Nov. 8, 1897..	350 00
Peters, John G.....	Low Point.....	Oct. 1, 1865..	460 00
Pettis, William.....	Parrsboro'.....	Dec. 6, 1888..	340 00
Palmer, Howard.....	Wolf Point.....	Oct. 14, 1899..	250 00
Palmer, H. W.....	Lahave, Fort Point.....	May 22, 1878..	200 00
Perry, John.....	Sheet Rock.....	Dec. 17, 1878..	500 00
Perry, Levi.....	North East Harbour Range Lights.....	June 17, 1899..	200 00
Peters, John N.....	Brier Island.....	" 6, 1901..	400 00
Pope, John.....	Main-à-Dieu.....	Sept. 11, 1902..	300 00
Patterson, Wm.....	Dartmouth.....	June 3, 1903..	100 00
Peters, Jr.....	Low Point Fog Alarm Engineer.....	Dec. 29, 1903..	500 00
Robinson, Charles.....	Black Rock.....	Mar. 16, 1885..	330 00
Ruggles, Frank.....	Boar's Head.....	May 24, 1901..	350 00
Robicheau, B. H.....	Cape St. Mary.....	July 5, 1886..	350 00
Rathburn, S. M.....	Horton Bluff.....	..... 1879..	250 00
Reid, George J.....	Isle Haute.....	Oct. 18, 1889..	500 00
Ross, Robert.....	George Island.....	Jan. 18, 1876..	250 00
Robblee, Jacob V.....	Shafner Point.....	May 29, 1897..	150 00
Riley, Simon W.....	Annapolis Royal.....	Mar. 7, 1892..	100 00
Richards, Stephen C.....	Charlo Harbour Range.....	Nov. 4, 1901..	120 00
Ross, Alex. W.....	Little Narrows.....	May 23, 1902..	120 00
Rogers, Lloyd.....	Amet Island.....	Nov. 11, 1902..	450 00
Smith, Eph.....	Sambro Inner Island, Pole Light.....	Jan. 3, 1900..	40 00
Scott, M. C.....	Guysborough.....	April 19, 1884..	220 00
Spencer, Robert A.....	Spencer Point.....	April 1, 1870..	125 00
Suthern, Edward W.....	Westport.....	" 12, 1890..	300 00
Saulnier, John H.....	Church Point, St. Mary Bay.....	Aug. 8, 1878..	200 00
Sampson, C.....	Ouetique Island.....	Dec. 1, 1874..	350 00
Strum, James A.....	Westhaver Island.....	Sept. 25, 1888..	200 00
Sollows, A. J.....	Port Maitland or Green Cove Pole Light.....	Dec. 28, 1900..	75 00
Sampson, Theodore.....	South Beaver Harbour Pole Light.....	Oct. 15, 1892..	80 00
Smith, Caleb.....	Salter Head Beacon Light.....	June 21, 1888..	60 00
Smith, William B.....	Westhead, Cape Sable Island.....	April 12, 1890..	200 00
Simpson, John.....	Pictou Custom House Light.....	Dec. 10, 1901..	100 00
Smeltzer, John D.....	Hobson Island.....	April 10, 1900..	300 00
Smith, John Young.....	Page Island.....	Jan. 17, 1901..	150 00
Stevens, James Gordon.....	Sand Spit, Shelburne Harbour.....	Mar. 11, 1903..	280 00
Slaunwhite, S. P.....	Terence Bay.....	Oct. 13, 1903..	100 00
Vigneau, George.....	Jerseyman's Island.....	Mar. 23, 1883..	300 00
Vance, George.....	Masstown.....	June 29, 1898..	25 00
Walsh, Patrick.....	Lingan Head.....	Feb. 22, 1902..	200 00
Wolfe, Howard M.....	Ironbound.....	June 22, 1895..	250 00
Wells, James.....	Whitehead.....	Oct. 20, 1897..	510 00
Wainbold, James.....	Sheet Harbour Passage.....	May 11, 1887..	50 00

\* Per month during season of navigation.



STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

NOVA SCOTIA—Concluded.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Webb, Patrick.....	Harbour au Bouche .....	Feb. 19, 1896..	250 00
Webber, James M .....	Torbay .....	May 10, 1898..	300 00
Wynacht, W. H. . . . .	Cross Island Lighthouse and Fog Whistle. . . .	April 13, 1898..	800 00
Warren, R. V.....	Ingonish Island .....	Sept. 17, 1903..	360 00
Young, Uriah .....	Chester, Quaker Island.....	Feb. 15, 1884..	400 00
Yorke, Freeman. . . . .	Cape Sharpe.....	June 30, 1902..	250 00

PRINCE EDWARD ISLAND.

Anderson, Albert.....	St. Peter's Harbour .....	July 25, 1900..	130 00
Allen, Joel S. ....	Indian Point Pier.....	May 18, 1898..	375 00
Beaton, Angus.....	Hazard Point, Inner Range Light.....	Nov. 21, 1902..	60 00
Clark, Jesse George .....	St. Andrew's Point, Inner Range.....	Aug. 14, 1901..	125 00
Champion, Wm. . . . .	Cascumpec Harbour.....	Oct. 25, 1897..	100 00
Costain, Frederick.....	Miminegash, Inner Range .....	May 19, 1897..	40 00
Connors, George.....	Georgetown, St. Andrew's Point, Outer Range.	June 3, 1901..	125 00
Fraser, John.....	Summerside Range Front Light... ..	April 12, 1897..	100 00
Gaudet, Agape.....	Big Tignish.....	Aug. 30, 1897..	130 00
Gillis, Donald.....	Point Prim .....	Dec. 10, 1897..	300 00
Gallant, Jos. Jos.....	Cape Egmont.....	Oct. 21, 1902..	200 00
Hardy, Wm.....	Little Channel.....	July 26, 1875..	100 00
Howatt, Abner J.....	Leards Outer Range Light, Crapaud.. . . .	" 22, 1893..	100 00
Harris, Wm.....	Cape Bear.....	Nov. 11, 1896..	350 00
Inman, James. ....	Crapaud Inner Range.....	1901..	100 00
Kielly, John Andrew.....	Cove Head, Inner .....	Nov. 27, 1890..	99 00
Lewis, James.....	Brighton Beech Range.. . . .	March 1, 1899..	100 00
Munn, Duncan.....	Little Sands .....	May 1, 1877..	30 00
Morrison, John D.....	Cardigan River.....	Aug. 15, 1901..	100 00
McDonald, John W.....	Tracadie .....	May 24, 1901..	100 00
McRae, Daniel.....	Hazard's Outer Range Light.....	April 6, 1900..	70 00
McDonald, Lauchlin .....	East Point Lighthouse and Fog Whistle. . . .	Feb. 23, 1897..	600 00
McDonald, John.....	Orwell.....	June 25, 1879..	80 00
McLeod, Jas. H.....	New London.....	Jan. 29, 1896..	125 00
McDonald, Wm.....	West Point.....	Aug. 22, 1876 ..	300 00
McKay, John. ....	Wood Island.....	Sept. 12, 1898..	250 00
McDonald Angus .....	Souris East.....	Nov. 13, 1880..	300 00
McDonald, Jas. A.....	Savage Harbour.....	July 11, 1889..	100 00
McLeod, Lemuel.....	Murray Harbour Inner.....	Dec. 21, 1897..	50 00
McPherson, Daniel W.....	Brush Wharf, Orwell, Range Lights.....	Jan. 13, 1899..	60 00
McNeil, Alex. S.....	Block House Point, Charlottetown . . . .	March 25, 1901..	340 00
O'Brien, Patrick.....	Miminegash Range.....	May 14, 1897..	60 00
Phee, James.....	North Point.....	Sept. 4, 1897..	300 00
Penny, Robert.....	Murray Harbour, Outer .....	Nov. 11, 1897..	50 00
Pino, Joseph N.....	North Rustico.....	Feb. 6, 1897..	125 00
Ranaghan, Peter.....	Sea Cow Head.....	April 21, 1873..	250 00
Robertson, Alfred.....	Annandale Range Lights.....	Oct. 5, 1898..	100 00
Sinclair, Wm.....	Fish Island.....	March 8, 1897..	250 00
Stuart, Geo. ....	Summerside Harbour Range Back Light.....	Sept. 8, 1895..	80 00
Steele, Colin.....	Panmure Head.....	June 3, 1901..	250 00



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Concluded.*PRINCE EDWARD ISLAND—*Concluded.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Tuplin, Jas. C.....	Sandy Island, Cascumpec.....	May 5, 1897..	300 00
Taylor, Chas.....	Darnley Point Range Lights..	June 14, 1897..	60 00
Taylor, James W.....	St. Peter Island.....	May 1, 1897..	200 00
Wiggings, G. W. J..	Darnley Point Range.....	Oct. 16, 1896..	100 00
Wright, Chas. L.....	Wright's Range Light, Crapaud Harbour.....	June 14, 1894..	100 00
Young, James.....	Wood Island Harbour.....	Oct. 27, 1892..	80 00

## BRITISH COLUMBIA.

Allison, Frank Fagan. . . .	Portier Pass.....	Nov. 12, 1902..	*30 00
Brown, Wm. Henry . . . .	Ballinac Island.....	Oct. 3, 1901..	200 00
Blanchard, B.....	The Sisters . . . . .	Dec. 20, 1902..	500 00
Black, George M. . . . .	Fiddle Reef.....	May 21, 1903..	*25 00
Carpenter, C.....	Dryad Point . . . . .	Nov. 7, 1899..	180 00
Crozier, James.....	Bare Point Chemainus . . . . .	June 12, 1897..	168 00
Clarke, M. G.....	Entrance Island Lighthouse and Fog Whistle..	Nov. 26, 1897..	900 00
Codville, James . . . . .	Pointer Island.....	Dec. 26, 1899..	360 00
Croft, M. A.....	Discovery Island Lighthouse and Fog Whistle.	April 1, 1902..	900 00
Daykin, William P. . . . .	Carmanah Point Lighthouse and Fog Whistle..	Nov. 4, 1890..	1,200 00
Davidson, John . . . . .	Cape Mudge . . . . .	June 27, 1898..	360 00
Eastwood, F. M. . . . .	Race Rocks.....	Jan. 31, 1891..	1,200 00
Erwin, Walter.....	Point Atkinson Lighthouse and Fog Whistle..	Oct. 5, 1880..	1,000 00
Forsythe, James.....	Ivory Island.....	Sept. 5, 1900..	500 00
Georgeson, Henry. . . . .	Active Pass Lighthouse and Fog Whistle. . .	July 21, 1884..	900 00
Georgeson, James.....	Saturna Island, East Point.....	Oct. 26, 1889..	550 00
Grove, John.....	Prospect Point.....	June 21, 1898..	300 00
Gallop, J. W.....	Balfour.....	Mar. —, 1900..	240 00
Gordon, Walter.....	Yellow Island.....	Sept. 27, 1901..	500 00
Greenway, H.....	Fraser River.....	Jan. 30, 1902..	900 00
Harrap, R . . . . .	Coffin Island and Miami Reef.....	Apr. 15, 1903..	300 00
Harrison, S. G.....	Berens Island . . . . .	Nov. 4, 1897..	300 00
Harvey, Thos. W.....	Lawyer's Islands.....	Oct. 22, 1901..	600 00
Jeffries, Alfred.. . . .	Sister's Rock, Vancouver.....	April 30, 1901..	500 00
Jones, William D.....	Brockton Point, Burrard Inlet.....	Aug. 20, 1890..	300 00
Johnston, Capt. George...	Fisgard.....	July 30, 1901..	500 00
Kootenay Electric Light Co.	Kaslo Spit . . . . .	Dec. 1, 1897..	240 00
Moore, Hugh.....	Dock Island.....	May 15, 1903..	*20 00
McColl, T. Wm. . . . .	Garry Point.....	July 24, 1898..	*10 00
McColl, S. Wm.....	Mouth Fraser River Lights.....	March 1, 1903..	*25 00
Patterson, Thomas.....	Cape Beale.....	Mar. 2, 1895..	†500 00
Richardson, John.....	Portlock Point Lighthouse and Fog Alarm . .	Dec. 2, 1895..	460 00
Scarlett, Robert.....	Egg Island.....	Aug. 22, 1900..	600 00
Sparks, T. . . . .	Brotchy Ledge and other Beacons, Vict. Harb.	Jan. 29, 1903..	15 00

\* Per month. † Allowance, \$700 for assistant and provisions.



APPENDIX

STATEMENT of Expenditure by the Marine Department

	1868.	1869.	1870.	1871.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—				
Above Montreal .....	40,561 28	42,306 69	46,289 05	44,054 01
Montreal District .....	23,053 56	25,762 54	21,669 49	22,453 52
Below Quebec.....	45,615 35	41,651 73	43,730 61	31,582 75
Nova Scotia .....	46,460 72	56,394 88	43,682 86	76,230 77
New Brunswick .....	20,488 00	23,893 00	27,485 14	20,542 29
Prince Edward Island .....				
British Columbia.....				
Construction—				
Above Montreal .....	3,136 15		2,976 83	8,770 55
Quebec.....	7,323 75	7,492 59	1,543 06	
Nova Scotia .....	22,041 42	6,905 80	18,967 23	10,948 31
New Brunswick .....			11,555 91	8,735 73
Prince Edward Island .....				
British Columbia.....				
Dominion steamers—				
Quebec.....	69,026 73	37,176 02	34,549 49	59,797 05
Nova Scotia .....	14,778 92	26,603 94	19,759 96	13,139 86
New Brunswick .....				
Prince Edward Island .....				
British Columbia .....				
Examination of masters and mates.....			908 12	1,407 66
Hudson's Bay expedition.....				
Investigations into wrecks .....			140 00	
Marine Hospital, Quebec .....	19,977 36	19,221 45	21,618 73	19,823 18
Marine hospitals.....	1,070 86	15,615 71	15,652 62	15,728 93
Meteorological service .....	8,200 00	8,950 00	8,950 00	9,379 82
Registration of Canadian shipping.....				
Removal of obstructions.....			2,350 07	1,000 00
Rewards for saving life.....				
Signal service .....				
Steamboat inspection .....	7,106 93	7,999 00	7,396 96	8,321 00
Survey, Georgian Bay .....				
Water Police, Montreal.....	27,445 35	10,238 71	9,323 31	8,030 00
" Quebec.....		12,633 59	9,038 62	9,370 73
Civil Government.....	15,083 88	18,064 25	19,401 05	20,220 96
Steam communication—				
Between Quebec and Maritime Provinces.....				
Between Prince Edward Island and Mainland.....				
Purchase of steamer to replace—				
Glendon.....				
Lady Head.....				
Winter mail service, Prince Edward Island.....				
Tidal observations.....				
Gratuities.....				
Survey, Burrard Inlet.....				
Export cattle trade .....				
	371,070 56	360,899 90	367,129 11	389,537 12



[illegible]



STATEMENT of Expenditure by the Marine Department

	1881.	1882.	1883.
	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—			
Above Montreal.....	65,541 21	71,048 50	70,116 68
Montreal District.....	14,326 36	21,643 05	22,260 32
Below Quebec.....	89,781 29	91,098 66	102,784 99
Nova Scotia.....	128,918 59	137,846 15	150,793 17
New Brunswick.....	63,921 90	66,073 00	75,946 92
Prince Edward Island ..	12,997 36	16,985 72	17,907 27
British Columbia.....	17,570 72	17,803 00	18,349 06
Cape Race.. ..			
Construction—			
Above Montreal.....	14,180 02	13,581 00	9,782 27
Quebec.....	7,539 76	3,731 31	9,672 50
Nova Scotia.....	7,757 52	13,355 00	9,422 75
New Brunswick.....	4,578 52	2,253 80	1,022 57
Prince Edward Island ..	8,150 06	3,092 00	1,934 49
British Columbia.. ..	8,655 39	3,237 90	1,005 26
Queen's Printer.....			
Dominion steamers—			
Quebec.....	64,973 00	44,923 98	45,156 13
Nova Scotia.....	36,700 00	31,049 74	37,841 07
New Brunswick.....			
Prince Edward Island ..	15,139 95	23,911 97	19,680 00
British Columbia.....	11,788 09	8,504 61	25,484 00
Department.....			
Examinations of masters and mates.....	3,888 41	3,981 00	4,021 20
Hudson's Bay expedition.....			
Investigation into wrecks.....	310 48	863 19	875 64
Marine hospital, Quebec.....	19,964 33	19,938 12	19,998 53
Marine hospitals.....	32,218 94	33,162 45	29,880 78
Meteorological service.....	46,163 54	47,464 07	51,990 25
Registration of Canadian shipping.....	607 43	2,013 28	168 84
Removal of obstruction.....	150 00	1,116 51	35 80
Rewards for saving life.....	1,806 13	2,212 00	2,534 60
Signal service. . . . .			3,365 33
Steamboat inspection.....	12,211 65	14,835 00	16,209 00
Hydrographic surveys.....			77 81
Water Police, Montreal.....	21,953 26	21,994 74	15,798 24
"          Quebec.....	13,497 81	20,221 82	22,520 41
Civil Government.....	36,447 50	36,789 46	37,988 39
Steam communication—			
Between Quebec and Maritime Provinces.....			
Between Prince Edward Island and Mainland....			
Repairs to wharfs.....			
Purchase of steamers to replace—			
Stanley.....			395 55
Glendon.....			
Lady Head .. .			
Winter mail service, Prince Edward Island..			
Tidal observations.....			
Gratuities.....			
Survey, Burrard Inlet. ....			
Export cattle trade.....			
Survey, Bay of Quinté.....			
Relief of distressed Canadians.....			
Manning ships.....			
Widow of late A. Warner. . .			
McDonald Bros. ....			
Parliamentary Returns.....			
Investigating effect of Chicago drainage canal..			
John McDonald.....			
Longitude, Montreal.....			
Marine biological station.....			
	761,730 62	774,831 53	825,010 82



from Confederation to June 30, 1903--*Continued.*

21—15



STATEMENT of Expenditure by the Marine Department

	1892.	1893.	1894.	1895.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—				
Above Montreal.....	87,033 61	87,598 15	78,090 69	82,541 16
Montreal District.....	116,531 27	120,404 19	124,348 80	124,763 81
Below Quebec.....				
Nova Scotia.....	148,815 26	150,445 26	137,339 73	140,977 53
New Brunswick.....	66,886 69	71,079 46	59,917 96	69,654 46
Prince Edward Island.....	17,069 98	16,819 64	15,569 39	17,976 67
British Columbia.....	26,858 68	24,413 27	27,240 77	21,734 18
General account.....				
Construction—				
Above Montreal.....	21,704 05	8,766 62	12,581 15	2,699 40
Quebec.....	809 27	10,097 18	4,743 13	3,004 14
Nova Scotia.....	1,965 16	4,381 24	3,104 77	4,737 03
New Brunswick.....	1,845 35	1,271 15	115 45	1,597 80
Prince Edward Island.....	1 56		1,604 00	
British Columbia.....	9,478 81	2,958 61	6,356 43	180 83
General account.....				
Dominion steamers—				
Quebec.....	145,899 61	163,097 46	178,183 97	169,661 64
Nova Scotia.....				
New Bruntwick.....				
Prince Edward Island.....				
British Columbia.....				
Department.....				
Examinations of masters and mates.....	6,363 88	4,116 99	3,745 33	2,757 29
Hudson's Bay expedition.....				
Investigation into wrecks.....	603 21	643 49	850 81	351 15
Marine hospital, Quebec.....				
Marine hospitals.....	34,106 83	35,757 07	38,403 94	38,589 05
Meteorological service.....	67,138 06	64,165 60	66,440 96	64,588 34
Registration of Canadian shipping.....	462 59	1,476 19	394 00	207 40
Removal of obstructions.....	2,878 68	1,554 53	202 02	2,217 36
Rewards for saving life.....	6,398 93	7,432 64	8,014 67	6,591 34
Signal service.....	5,014 42	5,040 58	4,668 93	5,311 74
Steamboat inspection.....	22,736 59	24,386 95	25,961 36	26,385 88
Hydrographic surveys.....	16,451 10	17,542 11	31,461 76	12,653 28
Water Police, Quebec.....	6,161 60	5,436 23		
Civil Government.....	43,195 31	56,477 23	54,988 88	71,373 82
Repairs to wharfs.....		84 90	1,007 67	824 38
Purchase of steamer Minto.....				
Winter mail service, Prince Edward Island.....	3,309 44	4,376 96	6,497 03	6,138 18
Tidal observations.....	711 59	5,099 17	10,172 61	11,507 24
Gratuities.....			3,261 32	
Survey, Burrard Inlet.....	2,580 45			
Export cattle trade.....	1,411 57	1,711 73	1,350 83	2,268 74
Survey, Bay of Quinté.....		2,085 45		
Relief of distressed Canadians.....				7 30
Manning ships.....				500 00
Widow of late A. Warner.....				160 00
Macdonald Bros.....				4,000 00
Parliamentary returns.....				
Investigating effect of Chicago drainage canal.....				
John Macdonald.....				
Unforeseen expenses.....				
Marine biological station.....				
New life-saving station, Long Point.....				
Salaries temporary clerks.....				
Steamer to replace Bayfield.....				
Observatory, Sulphur Mountain.....				
Charles Morrison.....				
W. H. Smith.....				
Montreal Pilotage Comr.....				
" Dry Dock.....				
	861,426 80	898,720 03	905,654 34	895,828 28



SESSIONAL PAPER No. 21

from Confederation to June 30, 1903—*Concluded.*

1893.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
87,256 28	80,961 06	87,841 22	92,751 23	82,810 92	93,708 16	92,195 52	117,896 37
124,143 66	126,186 00	116,279 88	136,134 79	122,112 42	132,147 88	154,839 06	148,302 34
123,234 65	124,671 19	126,386 00	65,072 35	122,414 86	142,359 01	149,572 14	142,725 69
63,018 64	56,771 02	67,369 98	128,674 15	52,491 93	65,247 80	69,133 51	73,410 65
17,988 15	16,429 23	18,112 93	20,589 81	42,878 40	28,031 85	24,223 73	25,757 33
24,770 44	25,679 52	26,862 03	29,530 20	33,545 95	31,938 25	35,119 03	35,758 43
						46 75	
11,993 84	9,527 84	6,867 69	3,729 62	7,094 64	12,499 99	158,714 09	399,487 73
3,300 00	296 26	3,649 90	37,838 80	40,319 03	17,060 03		
1,842 94	61 71	4,067 99	3,123 16	4,884 22	12,832 69		
200 00	1 60	1,423 34	91 49		266 34		
	452 90	1,409 60	616 96	5,586 91	922 00		
225 50	569 99	6,414 19	19,305 60		4,160 74		
					660 03		
145,315 28	136,940 11	117,644 39	145,270 75	180,430 65	195,484 75	452,526 92	369,813 97
4,062 82	3,536 29	3,335 40	3,568 26	3,750 69	3,730 25	3,305 59	4,968 36
	19,091 32	27,050 66					
483 98	565 25	312 77	982 17	773 06	1,022 65	1,824 55	1,367 45
36,682 96	37,984 71	38,162 56	37,353 29	37,743 30	36,008 75	51,827 13	48,750 15
66,600 29	67,397 71	64,135 71	73,148 05	67,692 42	74,082 76	80,147 46	87,293 00
517 60	531 55	818 33	966 48	266 43	546 62	607 23	417 25
456 38	631 86	704 17	745 49	252 19	1,000 00	1,325 25	682 98
8,004 38	5,955 19	5,081 40	7,049 09	7,007 97	8,519 92	8,278 55	9,306 25
5,338 76	5,986 12	4,993 88	6,067 49	5,906 83	8,950 17	6,452 56	6,863 75
26,321 27	26,837 83	26,342 29	28,035 49	27,965 72	29,247 59	27,493 80	30,172 09
15,099 63	12,352 99	15,306 66	13,664 97	12,600 98	16,170 20	25,488 64	35,243 97
	74,801 37	74,644 05	72,833 97	63,331 61	68,776 95	70,246 32	84,442 53
2,644 69	1,795 56	1,618 97		697 87	1,261 06	2,824 28	1,721 91
			144,365 26	41,951 88			
7,779 69	21,931 05	9,575 31	8,439 70	1,503 70	2,093 93	8,835 86	6,211 28
9,627 45	13,166 20	3,081 45	5,186 35	4,372 18	7,060 20	8,925 33	14,520 00
						136 85	1,050 00
2,887 24		2,499 80	2,757 85	2,762 24	2,746 84	3,321 23	3,026 25
746 89							
291 08					133 32		95 10
2,500 00					1,659 14		
200 00							
				3,452 21	2,630 62	3,490 29	4,822 78
			5,709 10	739 61	1,990 58	1,998 85	2,000 00
						1,780 52	
						2,967 35	6,945 96
						50,000 00	
						55 00	3,167 62
						223 00	
						3,691 69	
							1,745 23
							3,528 25
793,634 49	867,772 90	856,192 50	1,102,601 90	982,561 97	1,029,925 32	1,501,618 88	1,671,494 77

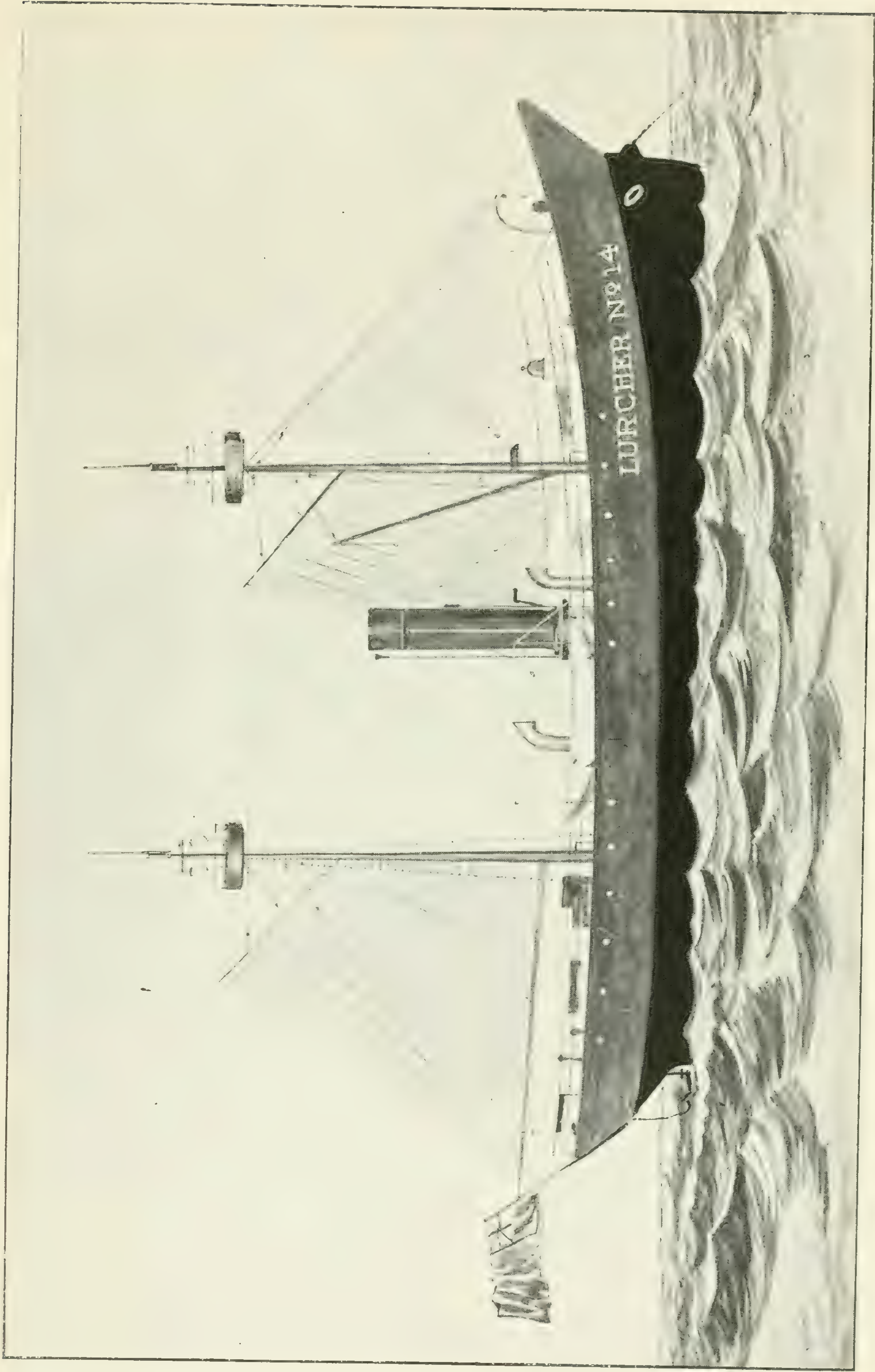


## APPENDIX No. 16.

## REWARDS FOR SAVING LIFE

Names and Designations of Persons.	Nature of Services Rendered.	Date of Services Rendered.	Description of Reward.
John H. Bray, master of the barge <i>Kremlin</i> of Boston, U. S.A.	Rescuing the crew of the brig. <i>May</i> of Lunenburg, N.S.	Sept. 13, 1901.	A gold watch and chain from Dept. of Marine and Fisheries.
Alfred Mercier, master, John Mercier, mate, R. Mercier and Alfred Landry sailors, and M. Landry, boy, of the <i>Cala Lilly</i> of Quebec.	Rescuing the crew of the schooner <i>Oregon</i> of Halifax, wrecked on the Labrador Coast.	Oct. 18, 1901.	To the captain \$192, to the mate, \$25, and \$10 to each of the men.
Robert Saunders, Daniel Matheson, Robert Greenless, John McGaw, Thomas McGaw, Walter McGaw, Thomas McGaw, and W. H. Ferguson (drowned) members of a volunteer life-saving crew.	Services rescuing the crew of the American schooner <i>Anne Maria</i> wrecked off Kincardine, Ont.	" 2, 1902.	A gold watch to each of the rescuing party from the President of the United States. The medal for Mr. H. Ferguson, who was drowned in the rescue, was presented to his father.
George W. Nass, master, Jesse Tanner, engineer, and Henry M. Nass, deck-hand of the steam tug <i>Maggie</i> of Lunenburg.	Rescuing the master and crew of the American schooner <i>Dreadnought</i> of Gloucester, Mass., wrecked near Lunenburg, N.S.	Dec. 13, 1902.	A binocular glass to master and a gold medal each to the engineer and deck hand from the President of the United States.
W. H. Taylor, master, E. Griffith, 2nd officer, Thos. Clendenning, John Jones-Ramsay, Thos. Cooper, John Cosgrove and Lythgve, seamen of the British steamer <i>Lake Megantic</i>	Rescuing the crew of the schooner <i>Grenada</i> of Lunenburg, N.S., wrecked near Halifax.	" 15, 1902.	A binocular glass to the master, a gold watch to the 2nd officer and \$15 to each of the sailors mentioned.
Robert McKenzie and Bruce Haydon, fishermen.	Rescuing E. B. McCallum, fisherman whose boat was capsized in St. Peters Bay, P.E.I.	May 13, 1902.	A silver watch and chain to each of the rescuers.
Capt. Malcolm McDonald, Robert Craigie, engineer, Neil McIvor, James Craigie and Geo. Green, sailors, volunteer crew of the tug <i>Huron</i> .	Escorting the disabled vessel <i>Sea King</i> , into Goderich, Harbour.	" 22, 1903.	Five dollars each to the captain and engineer and three dollars each to the sailors mentioned.
Abraham Cook, master, Henry Cook, Elzear Cook, James Fleet, Samuel Tanner, sailors of the schooner <i>Minnie M. Cook</i> of Lunenburg, N.S.	Rescuing the crew and one passenger from the wrecked schooner <i>Queen of the Fleet</i> , of Lunenburg.	Aug. 23, 1903.	A gold medal to the master and a silver medal to each of the sailors mentioned.





LIGHTSHIP "LURCHER," ON LURCHER SHOAL, BAY OF FUNDY.









SAND SPIT LIGHTHOUSE, ST. ANDREW'S HARBOUR, N.B.









ST. JOHN, N.B., HARBOUR BEACON.



PARRSBORO', N.S., LIGHTHOUSE.









UPPER TRAVERSE, ST. LAWRENCE RIVER, LIGHT AND PIER.



LOWER TRAVERSE PIER, ST. LAWRENCE RIVER STEAMERS HOLDING PIER AGAINST FALLING TIDE BEFORE SINKING IT.









FATHER POINT, P. Q., LIGHT STATION.

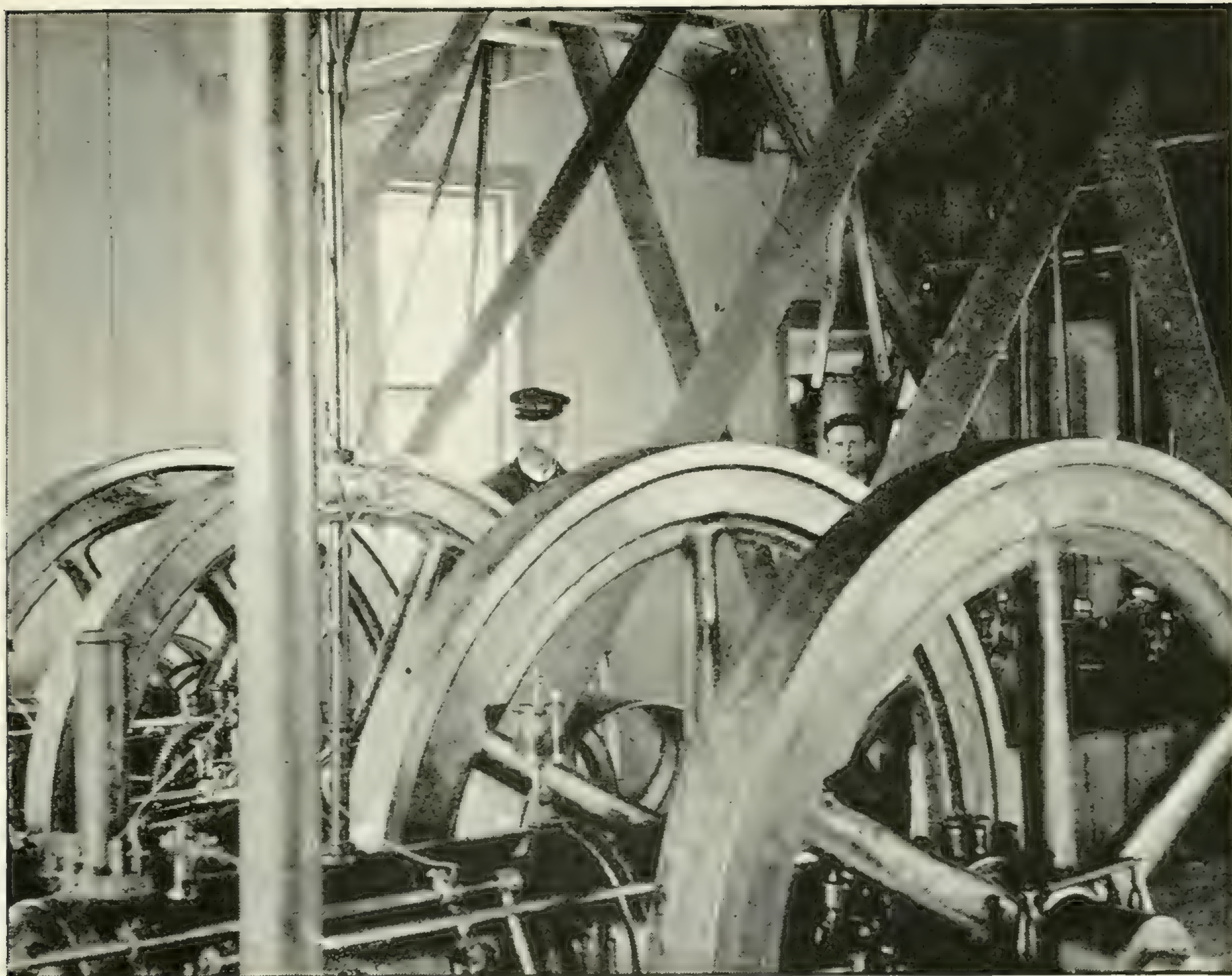


FATHER POINT, P.Q., FOG-ALARM BUILDING. EXPERIMENTING WITH TRUMPETS.









FATHER POINT, P.Q., FOG-ALARM MACHINERY.



QUADRA'S LAUNCH WAITING FOR TIDE AT HOLE-IN-THE-WALL, B.C.









LACHINF, P.Q., BACK RANGE TOWER, GAS LIGHT.



GAS BUOY BEING FILLED WITH ACETYLENE.







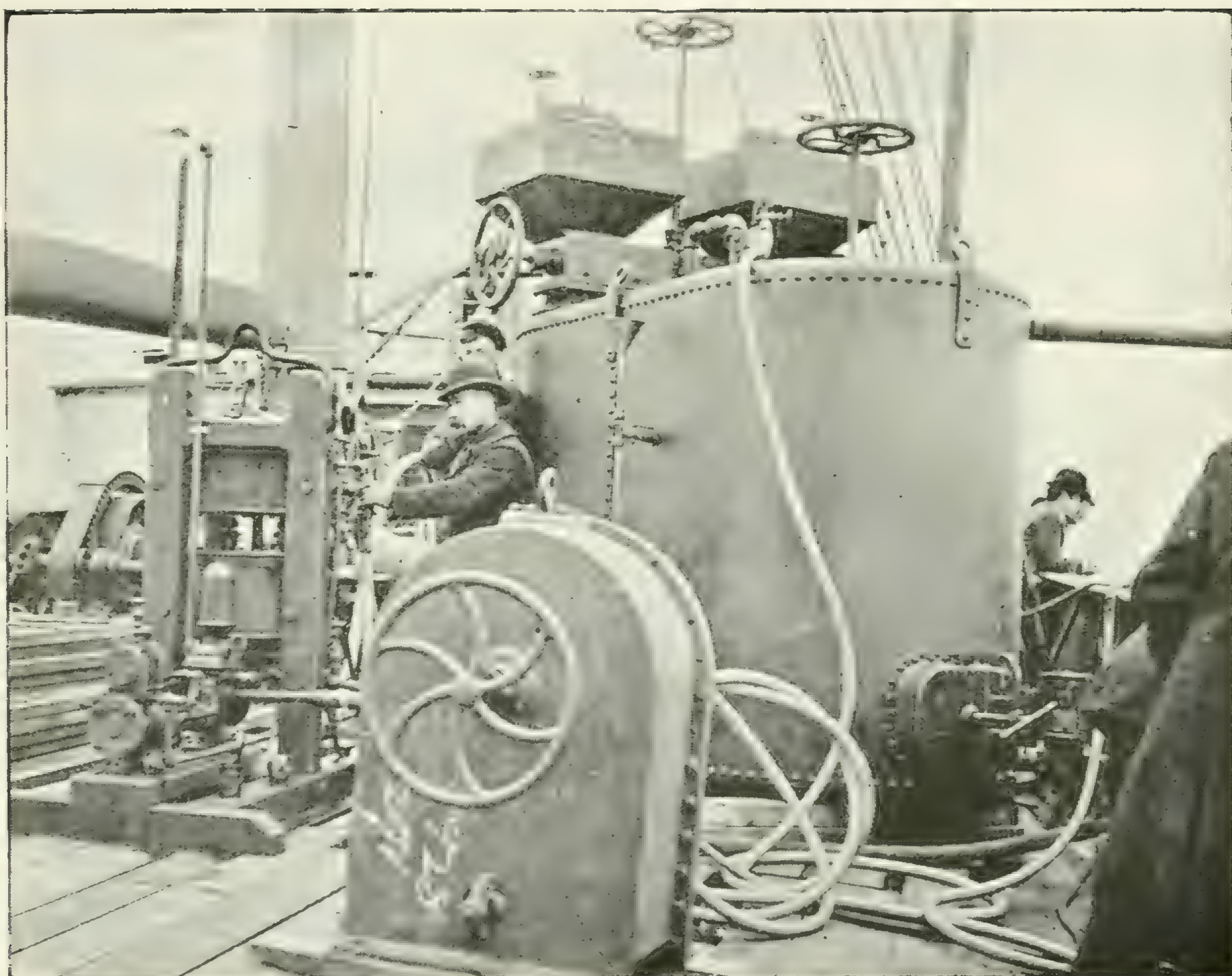


DOMINION GOVERNMENT STEAMER "SCOUT," EMPLOYED IN GAS BUOY SERVICE ON THE ST. LAWRENCE RIVER.







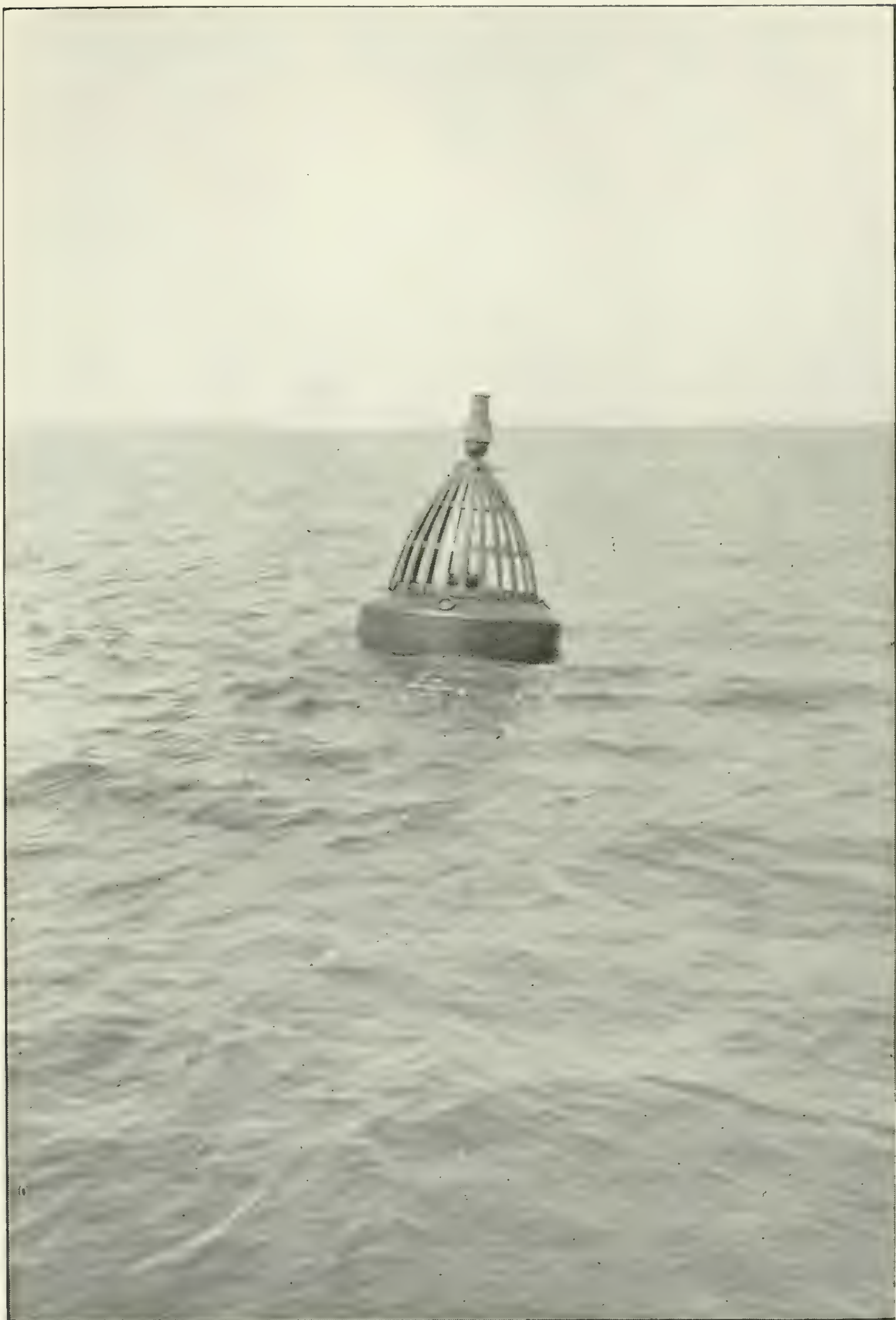


PORTABLE ACETYLENE GAS PLANT OPERATING ON STEAMER'S DECK.









ILE PERROT GAS BUOY, LAKE ST. LOUIS<sup>7</sup>









ILE BOUCHARD LIGHTHOUSE DURING ERECTION.









DOMINION GOVERNMENT STEAMER "ABERDEEN," LIGHT FORWARD.



DOMINION GOVERNMENT STEAMER "DRUID," PROCEEDING TO WINTER QUARTERS.

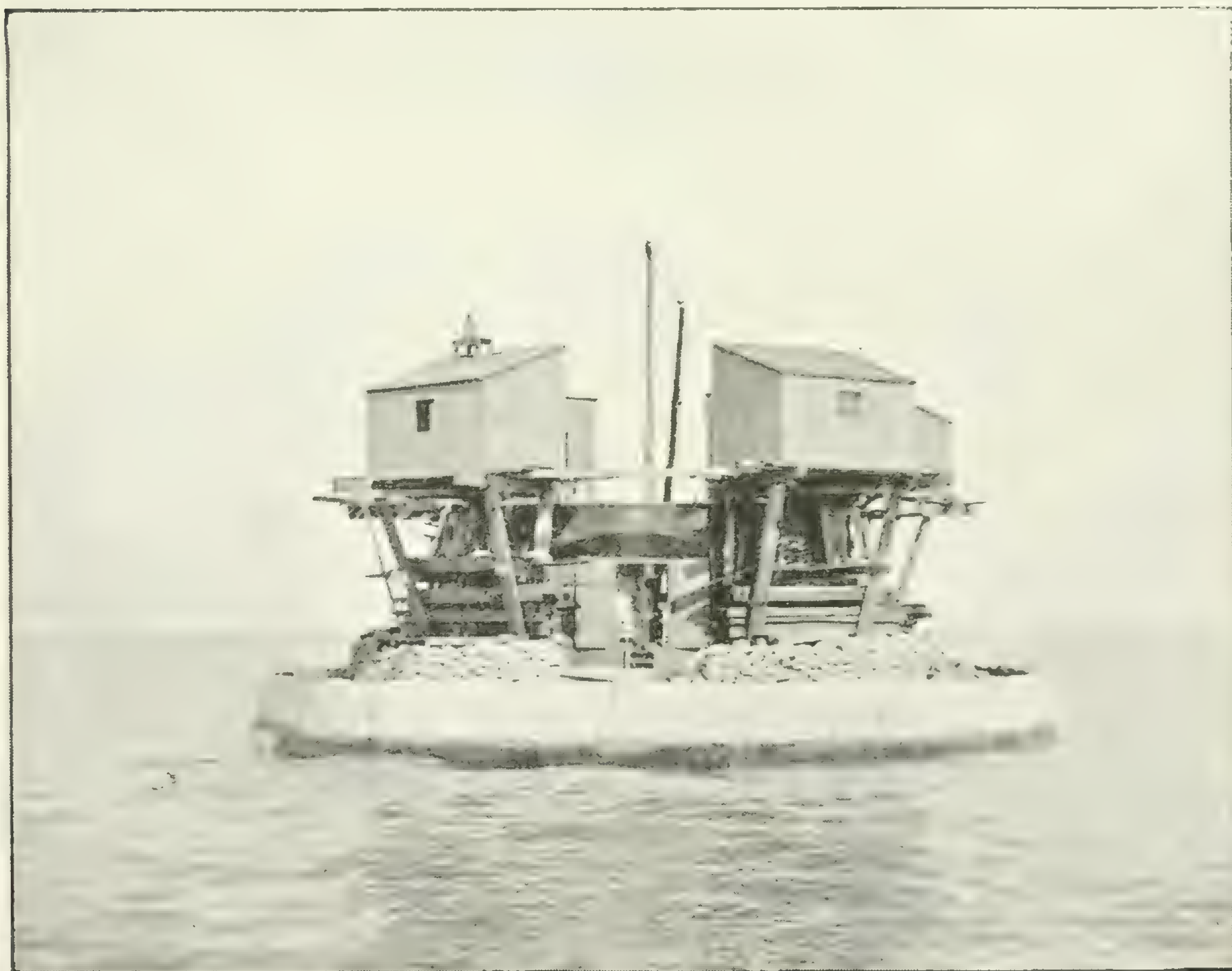








RIVER THAMES, ONT., BACK RANGE LIGHT.



PELEE PASSAGE LIGHTHOUSE, FOUNDATION PIER.









NIGGER SHOAL LIGHTHOUSE, BAY OF QUINTÉ.







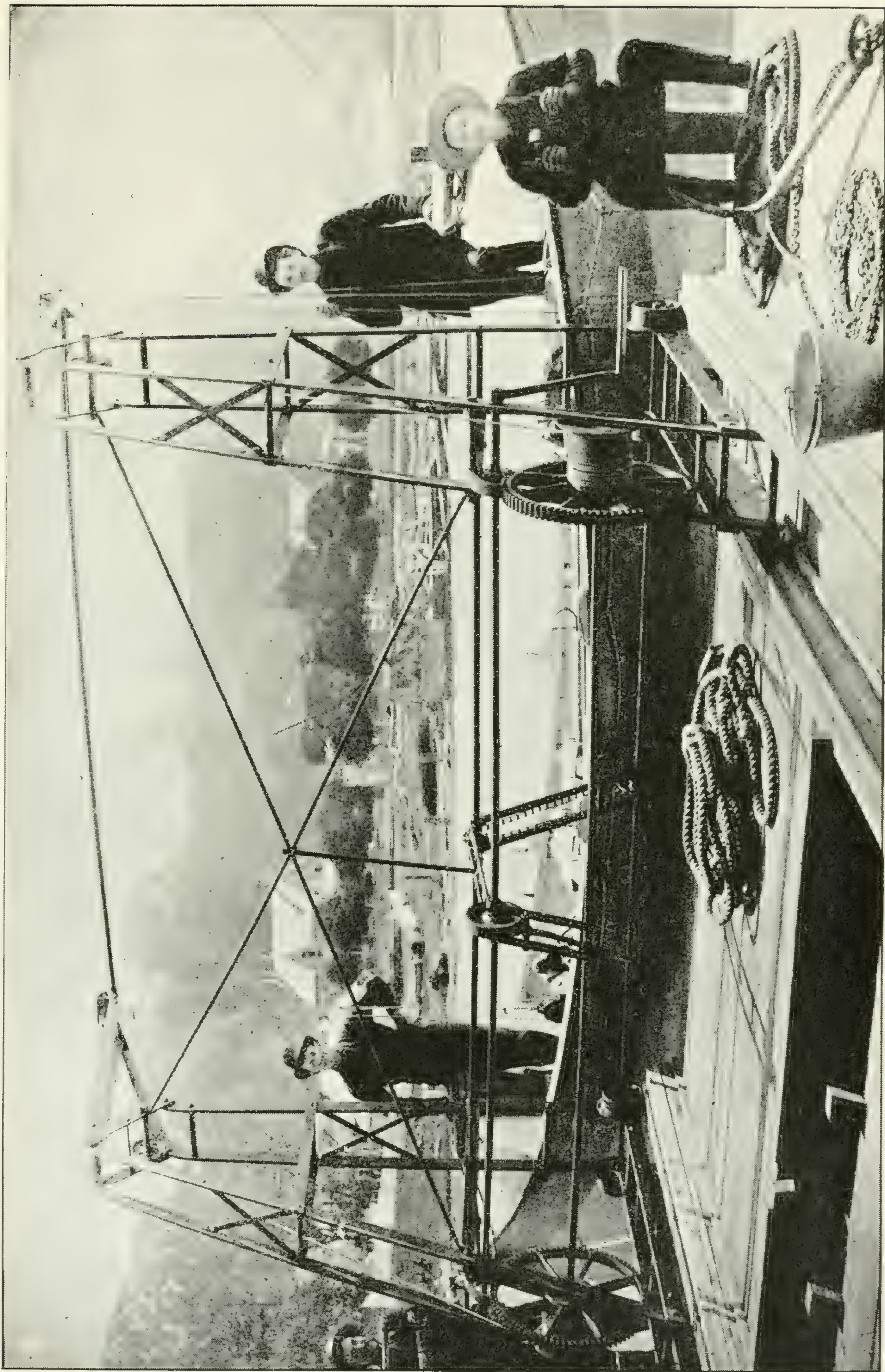


RED HORSE ROCK LIGHTHOUSE, THOUSAND ISLANDS, ONT.









PORT STANLEY, ONT., LIFE-BOAT HOISTING GEAR.









LAWYER ISLAND LIGHTHOUSE, B.C.









POINTER POINT LIGHTHOUSE, B.C.

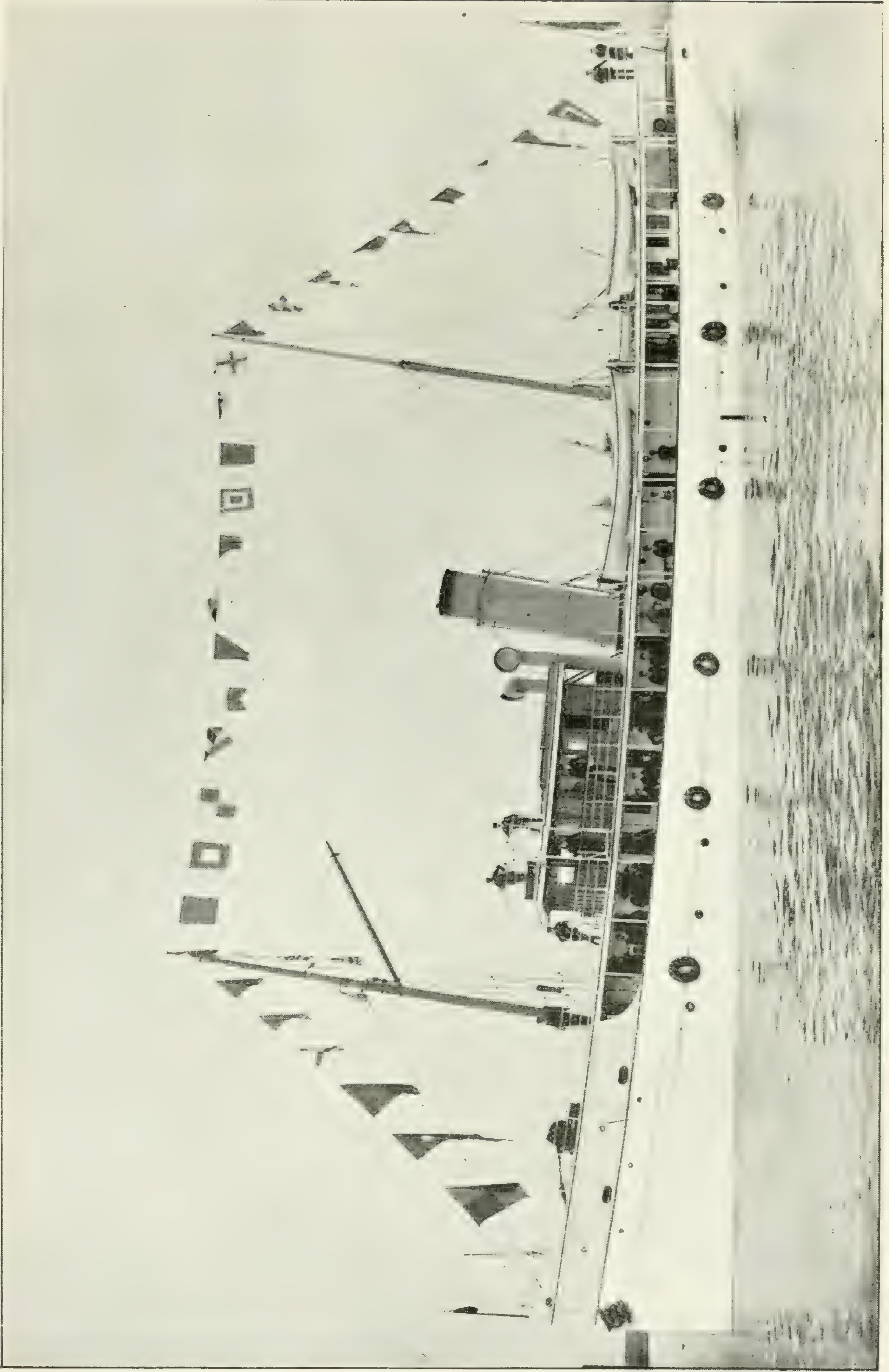


CAPE MUDGE LIGHTHOUSE, B.C.









HYDROGRAPHIC SURVEYING STEAMER "BAYFIELD."







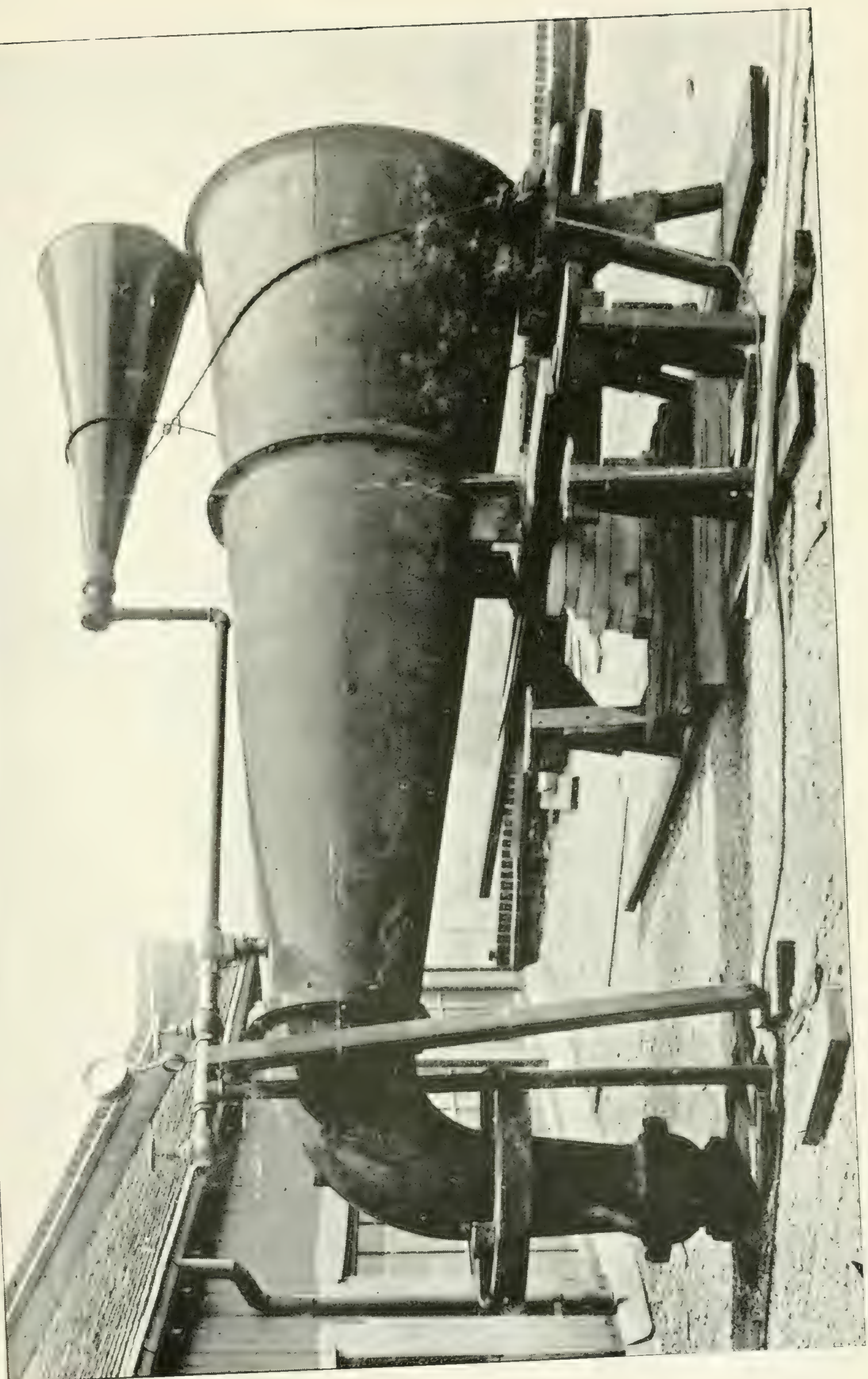


RAISING FOUL BUOY IN BRITISH COLUMBIA.







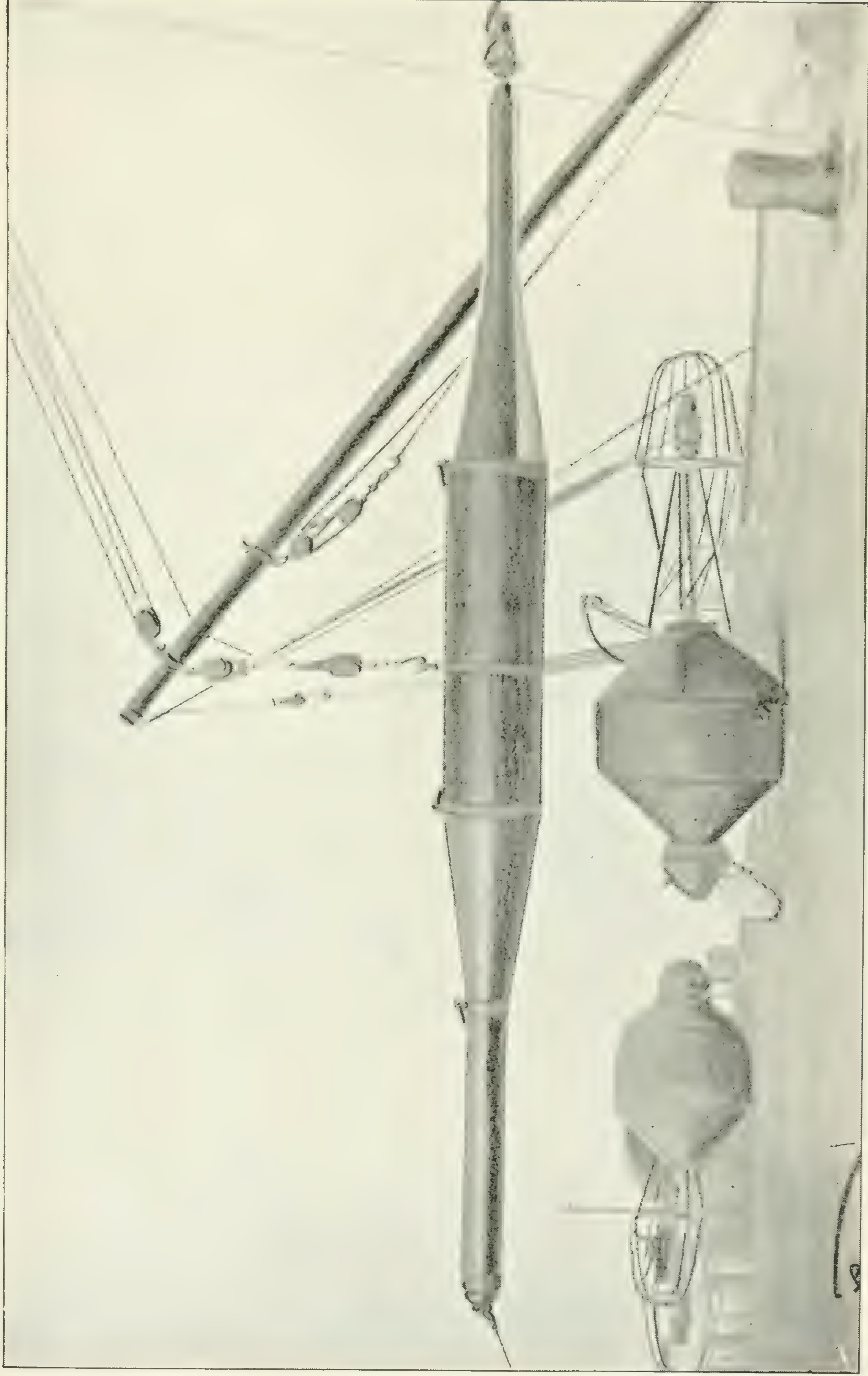


BOATLONE AND SIREN.







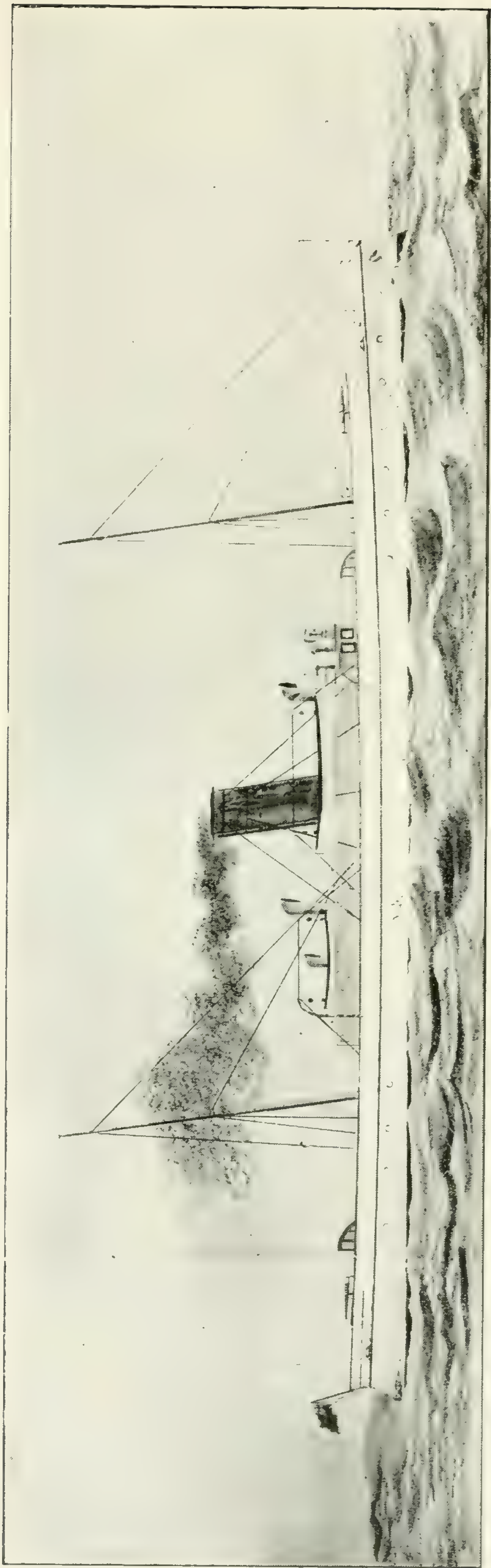


A SEA OR ICE GAS BUOY.







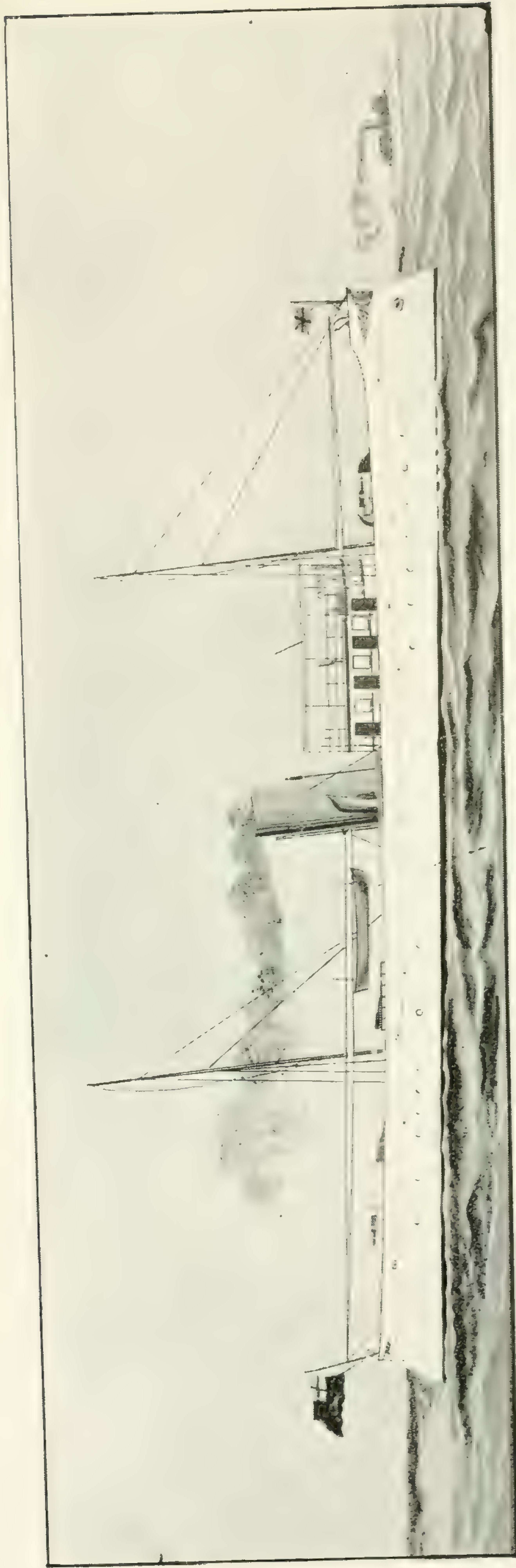


FISHERY CRUISER NOW UNDER CONSTRUCTION AT BARROW-ON-FURNESS, INTENDED FOR SERVICE ON THE ATLANTIC COAST.









FISHERY CRUISER NOW UNDER CONSTRUCTION AT TORONTO, INTENDED FOR SERVICE IN SALT OR FRESH WATER.



















